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[For information on the topography, climate, agriculture and commercial crops, irrigation, stock raising, natural resources, production and supply, waterways, railways, and roads of the valleys of the Tigris and Euphrates between the plateau of Asia Minor and the Persian Gulf, discussed as one geographical unit, rather than by political boundary, see, M1 Middle East, cat. 116, 21: Fisher, pp. 340-370.]

[For information on the topography, climate, agriculture, mineral wealth, railways, settlement pattern, productive capacity of the economy, and trade of the Levant coastland, see M1 Middle East, cat. 116, 21: Fisher, pp. 371-414.]

[For information on the topography, occupations and relative productivity of the desert plateau, and of the Arabian Peninsula as a whole, see M1 Middle East, cat. 116, 21:Fisher, pp. 427-449.]

But proofs of their increase are the hundreds of new villages tilled by Kurds and built by them in the regions of Kubur el Bid, Amuda, and Derbassiya.

The Kurds like the Arabs, follow a tribal organization. Starting from the east, the Koshar tribe, mostly nomadic but recently turning to agriculture, dominates Jazirat ibn Amr, i.e., the region of Deink and Ain Diwar. The Koshar border Shammar on the south and they are on fighting terms because Nayefz Pasha, chief of the Koshar, killed the brother of Dham, chief of Shammar. Next to the west is the Shitiya tribe around Kubur el Bid. This tribe is old in the region. Its members are Arab in their dress and, in contrast with all the other Kurdish tribes, they speak Arabic as well as Kurdish. Its lands lie west of Shammar and more within the Tay region but its relations with both are friendly.

Qamishli, which is a Tay region, includes villages of the Pinar Ali tribe. But west of Qamishli comes a solid bloc of 100% Kurdish villages extending for more than sixty kilometers and reaching to the west of Dirbassiya practically uninterrupted by any Arab village. This area is undoubtedly one of the most fertile of Jazirah. Within it, the Dakkuriya tribe is centered around Amuda, then follow the Kikiya around Dirbassiya, and the Milliya from Dirbassiya to Ras el Ain.

The Kurds are considered very good farmers. They plow and plant with mules but they rent combines for the harvest. This is because they have learned that combine harvest is more economical. The Kurd is also greatly praised for his character. He is truthful, honest, and upright in his dealings. He keeps his word and the merchants of the Jazir trust him completely. He is also clean in his home and in his dress, and though Bedouins reproach him for not being generous in his house, his standard of living is higher than the Bedouin and his villages are much cleaner.

The Kurds owe allegiance to their Agha who takes the place of the Bedouin Sheik. But this relationship is weaker than is the case of the Bedouins. The successive Governments did not give the Agha grants of money or similar authority over his tribesmen in the manner of the Sheik. The Kurds were considered from the start sedentary people subject directly to Government laws. That is why most of the Kurds own and till their lands in their own right.

III The Shashans

163 The Shashans, a Circassian tribe around Ras el Ain, complete
167 the rural population of Jazirah. They migrated to Syria during the
463 Ottoman rule and settled as mercenary soldiers. They are not good
134 at agriculture and their lands are not fertile and do not compare with those of the Kurds.

IV. The Christians

1621 The cities and commercial centers of Jazirah are an extra-or-
361 dinary mixture of races and creeds, but they are perhaps more than 80% Christian. This is true of Kubur el Bid, Qamishli, Amunda, Dirbassiya and Hassakeh.

361 As in the case of the Kurds, the Turkish massacres of the Christ-
167 ians in Mardin and the mountainous country around it started their
463 migration to Jazirah. The Christians reached Jazirah without proper-
429 ty or capital with which to begin. They settled mostly in the towns mentioned. A few of them already owned lands, others were traders and had previous relations with the Bedouins and Kurdish tribes. In a relatively short time the towns grew and flourished. The Christinas prospered from commerce before the expansion of agriculture. The tariff differences between Syria and Turkey on such important commodities as sugar, tea, and coffee and the intermingling of the Kurdish population on both sides of the frontier, made the Jazirah towns ideal for an extensive smuggling business.

438 The town Christians also served as middlemen to the merchants
463 of Aleppo, who provided the money to lend to the Bedouins and Kurds
452 or to buy the sheep, cattle and crops. This work on a commission
439 or partnership basis coupled with the smuggling business proved profitable to the merchants of Jazirah, so that during the last twenty years many of them have become wealthy and have come to own real estate and agricultural lands and machinery without, however, abandoning their commercial activities with the merchants of Aleppo. In fact, the general prosperity and development of Jazirah has increased its need for the credit of Aleppo.

1624 This picture of the Christian population of Jazirah is not complete
163 without mention of the Christian peasants who migrated from the
191 mountain villages and settled in the country. Though Christian and living in villages 100% Christian, some of them are Kurdish in their
795 language, dress and customs. Some other villages are populated

Moslems alike whether Turks or Arabs, and being suspicious of the surrounding Kurdish and Bedouin tribes, relied on the French for protection and became a tool in their hands to oppose the nationalistic aims of Syria. 6621 182

When in 1936 negotiations between France and Syria started for the conslusion of a treaty similar to the British-Iraqi treaty, French officials in Syria who were opposed to such a policy played on the fears of the Jazirah Christians and incited them to rebellion. They rose up and drove out the Syrian public employees and proclaimed Jazirah independent. They were supported by a majority of the Kurds who feared Bedouin domination in case Syria became independent, and by some Bedouin Sheiks notably the Sheiks of Tay and of Jagjag Jubur. Dham and Mizor, Chiefs of Shammar, and the Sheik of Khabur Jubur, remained loyal to the Syrian Government. The problem was solved when the negotiations in Paris failed and the French resumed their authority in 1937. All remained quiet during the war, and when Syria became independent through the intervention of the British in 1945, no one in Jazirah made any difficulty. 648 669 619

The population of Jazirah was estimated at the end of 1951 to be 162,000. This estimate can only be tentative because no census was taken and the number of unregistered persons is large. The Shammars are mostly unregistered and so are the Juburs. The same holds true of the Kurds who have migrated from Turkey. 1624 659 361

The number of members in each denomination is unknown, as is the number of town dwellers. Qamishli is estimated to have 30,000 inhabitants, Amuda and Derbassiya 8-10,000 each, and Hassakeh above 10,000. Kurds probably outnumber the Bedouins in Jazirah.

II. Land Tenure for the Tractor Owner

427

The tractor owner gets better advantages when he rents land. He also pays a percentage of the crop. It used to be 5-6% with the obligation to plant a "shkara" for the landowner. The "Shkara" is a certain amount of seed which the landowner provides and which the tenant agrees to plant by his machines and to harvest with his combine free of charge. The "shkara" is proportional to the area of land rented. It varies between 10-20 sacks of wheat. In the last few years when demand for land became great, the rents rose to 10-12% with the habitual "shkara". Usually the rental contracts are for three years. They rarely exceed this period.

III. Land Tenure Along the Khabur

Along the Khabur rents are different in manner. There, the landowner provides not only the land but also the water for irrigation and half the seeds. In return he receives half the crop. The peasant furnishes his labor for plowing, seeding caring for the irrigation canals, irrigation and harvesting.

Rents for pump irrigation were between 7-10% until 1951. The cotton rush increased the rents for strips of land near the river to 15-20%, but the failure of the crop reduced the rush for land and the rent is down again to around 10%.

THE PROBLEM OF CREDIT IN JAZIRAH

311

The rapid economic advance of Jazirah in the last years is nothing less than amazing. In 1941, in the region of Qamishli, for example, the farthest village cultivated was less than 20 kilometers south of the city. All the land beyond was pasture for the Bedouin. East of Kubur el Bid to Tal Koshak, a distance of 60 kilometers, the land was similarly idle. There was not a single tractor in the region of Ras el Ain, and not a single water pump on the Khabur aside from those of the Assyrians.

361 365

Qamishli itself, the principal town of Jazirah, had no electric light, no paved roads, no sewage system, and very few acceptable houses to live in. The same was true in a larger measure of the other towns of Jazirah.

361 At present, agriculture extends in an unbroken line from the
311 Turkish and Iraqi borders south to the Rad and Hassakah, and west to
365 Ras el Ain and midway to Rakka. Qamishli has all the amenities of a fair-sized city with sewage, electricity, asphalted roads, running water, places of amusement, and modern office buildings and houses. The other towns of Jazirah show similar progress but in a smaller way.

454 All this development could not have been achieved without extensive use of capital. It was stated that the original emigrants to Jazirah whether Christians or Kurds, brought very little capital with them. Whatever they have now was made in Jazirah and not brought from outside.

I. Credit to the Bedouin and Kurd

4521 The nearest commercial market to Jazirah where credit was
438 available was Aleppo. Aleppo merchants first provided goods shipped to the towns of Jazirah to be smuggled into Turkey. And Jazirah merchants working on a commission or partnership basis made good profits. Some of them specialized in lending money to the Bedouins and Kurds and for them, also, credit was available at Aleppo. They borrowed at an interest rate of 9% and lent at 35-50%. Most of them, however, did not lend money outright as a general practice, but sold goods and especially textiles, coffee and sugar to the farmer against bills maturing at harvest time. The exorbitant interest was added over the price of the goods, and the peasant accepted it as a somewhat higher price and did not consider it as interest. Theis system still prevails at the present time.

II. Credit to the Machinery Owner

452 With the expansion of agriculture and the extensive use of agricultural machinery, credit in much larger amounts became necessary. The farmer using machinery needed two kinds of credit. He needed credit to pay for his machines, and seasonal credit to cover a part of his expenses for wages, seed, fuel, and general expenditures.

In the first years of the War, dealers in agricultural machinery supplied a part of the need by selling on an installment basis for a period of 20 months. But between 1943 and 1948 they demanded cash payment before delivery. In the last four years, they have renewed their credit facilities.

441 It used to be one of the worst roads in Jazirah. At the end of this stretch begins the desert of Deir Ezzor 100 kilometers wide. Some sections of it where rainwater prevents the passage of cars are paved. Nevertheless, the road closes during several weeks in winter.

Another road built crudely by the British Army stretches from Qamishli to Kubur el Bid-Talkochak-Mosul. It is paved with rough stones and it is only used by cars in winter. Beyond Tel Abu a road branches to Deirik and Ain Diwar.

[487] Aside from these, all Jazirah roads are tracks. There are no roads between Amuda, Derbassiya and Hassakeh, nor between Ras el Ain and Hassekeh, nor between the more important villages clustering around the several towns.

The absence of bridges across the Jagjag renders communication more difficult especially in winter when the waters of the river rise. There is a bridge at Qamishli, another one at Tal Brak 40 kilometers south and a third one at Hassakeh. In the relatively crowded villages near Qamishli along both sides of the river, crossings are effected with great hardship by loaded trucks especially in winter.

II Roads Between Jazirah and Aleppo

361 438 491 Aleppo is the nearest commercial center to Jazirah. It is the market for Jazirah grains, wool, samneh and hides. It provides Jazirah with all its needs of cement, textiles and all kinds of imported goods. That is why daily communication between the two regions is vital to Jazirah, but the Government has not judged it yet necessary to construct an all-weather road. Such a road exists in more or less good shape from Qamishli to Hassakeh and to Point 47. 491 From there on, the road to Rakka is closed all during the winter months and travel to Deir Ezzor is interrupted whenever there is heavy rain. The northern and shorter road Qamishli-Ras el Ain-Rakka-Aleppo is also closed in winter for goods and passengers. The shortest road and that which passes through the best developed areas is the one which follows the railway line Qamishli-Amuda-Dirbassiya-Ras el Ain-Tal Abiad-Jarablus-Aleppo. It is 420 kilometers long as contrasted with 465 kilometers for Qamishli-Ras el Ain-Rakka-Aleppo, and 485 kilometers for Qamishli-Hassakeh-Rakka-Aleppo and 565 for Qamishli-Hassakeh-Deir Ezzor-Aleppo which is the usual route followed in winter.

total Syrian cereals. Only Aleppo was ahead of it with 30% of the total production. (Gibb Report, table 16, p. 28) At present, it is probable that Jazirah surpasses Aleppo in cereal production and with an area approaching that of the Mohafazat of Aleppo, it is potentially more productive because of the Jagjag and Khabur Rivers which make possible a more diverse agriculture. 438

The problem of land ownership is bound to be settled in some way and credit is expanding gradually so that the dependance of Jazirah on Aleppo may diminish with time. The lack of lands and the constant increase in population will force the farmer to turn to intensive cultivation which in turn requires more labor and creates jobs for more people. The towns will benefit from increased production and population and will prosper and grow in their turn. It is logical to anticipate that Jazirah merchants will try to dispose of their crops without the help of Aleppo entrepreneurs. This makes for increased profits and more propserity. It is also reasonable to expect that a small industry based on the processing of agricultural products, such as flour mills, vegetable oil, starch, fruit, and vegetable conserves, will be established in the town of Jazirah. When cotton becomes an established crop, it is economical to gin it in the nearest town and save the cost of transport. The seeds will be needed for planting, for the extraction of oil and for cattle feed. 185

Qamishli is the only town of consequence in a fertile area of 700,000 hectares almost all cultivable in one way or another in the Qadas of Qamishli and Dijla. It is the chief town between Mossul and Aleppo, a distance of some 700 kilometers. Nisibin the older town now in Turkey was alwasy an important commercial center in the old times and Qamishli now has taken its place. It would not be surprising if in another 20 years Qamishli attained a population of 80,000. 361

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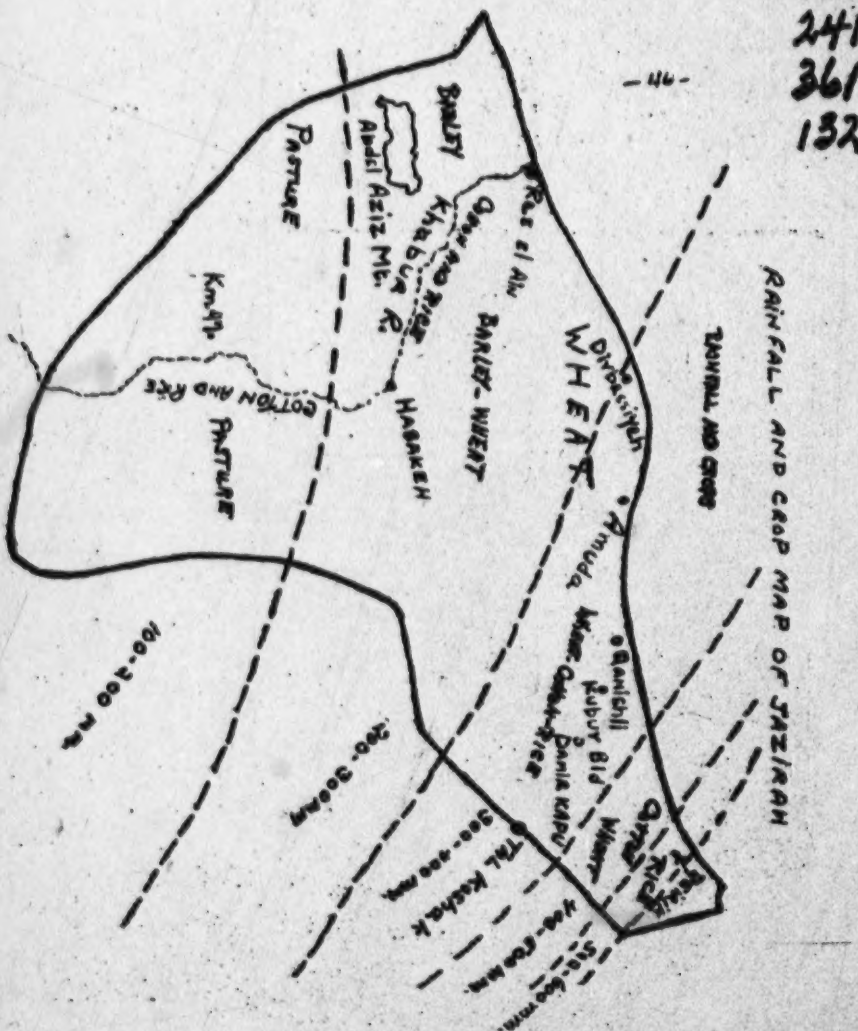

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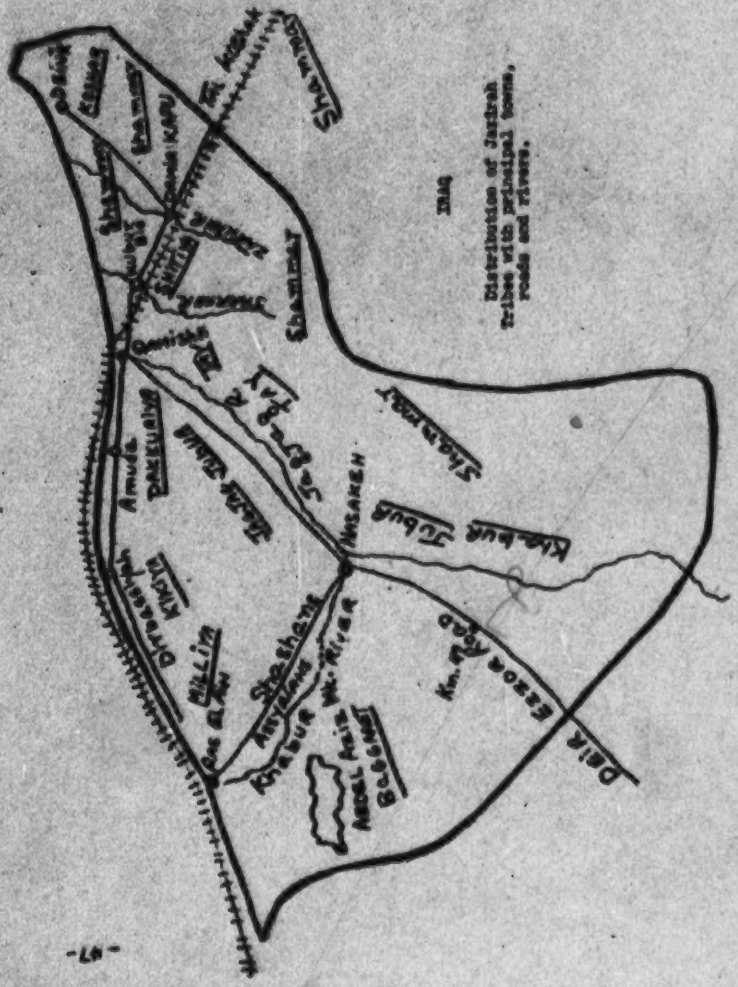

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7: Lewis S-5 (ca. 1940-45) 1948 MDI Syria MDI

MALARIA, IRRIGATION, AND SOIL EROSION IN CENTRAL SYRIA

NORMAN N. LEWIS

THIS study of the Selemiya region of central Syria had its origin in a modest wartime public-health program. Hundreds of patients suffering from malaria in the villages of this district were regularly treated by a mobile clinic, and it soon became obvious that this work had to be supplemented if not replaced by swamp drainage and other measures of malaria control. The necessary investigations showed that soil erosion in the hills in the east of the region was partly responsible for the swamps on the plain. The swamps themselves were frequently associated with ancient irrigation works. Thus various problems of the region—agricultural, social, and medical—were closely linked in origin and development. It was found that attempts to solve any one of them alone could not be more than partially successful, and the conclusion reached was that the ideal solution would have to be radical, comprehensive, and on a large-scale regional basis.

The Landscape

The greater part of the governmental subdistrict (caza) of Selemiya is a plain. Bounding it sharply on the west are low plateaus, capped by a level bed of basalt a few feet thick; to the southeast are ranges of hills, part of the Palmyrene group, to which the local collective name of Jebel Bil'as may be given.

The ground slope over much of the region is toward the town of Selemiya; drainage from an area of 620 square miles converges on the low flat land around the town. Because of the continuous subsurface flow, a perennial stream rises at Ain ez Zerqa, to flow 12 miles to the west to join the Orontes. All other perennial streams, however, are only a few hundred or thousand yards long and are used for irrigation; most of them rise in artificial underground channels. Most of the watercourses are wadis, dry or nearly dry for much of the year. In the hills these are steep, V-shaped valleys, on the plain generally wide, shallow, gravel-filled channels in gentle, open valleys.

Figure 2 gives a simplified indication of the configuration. Hydrologically, the strata may be simply grouped into the Cretaceous limestones

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> Mr. Lewis, Scholar of St. Catharine's College, Cambridge, was in Syria during the war and is now principal instructor at the Middle East Centre for Arab Studies, Shemlan, Lebanon, a training center for British government officials in the Middle East.

7:Lewis S-5 (ca. 1940-45) 1948 MD1 Syria MD1

175 Tamerlane's invasion and were dispersed in other parts of Syria. Of 3200 villages once on the tax rolls of the pashalik of Aleppo, only 400 were said to be inhabited when Volney visited the country in the 1780's.[10] Such peasants as remained in the west of our region suffered from misgovernment, extortion, and raiding by Arab tribes.

166 In the second half of the past century a movement of recolonization [231] started that is still in progress. Sheep-raising Arab tribes began to settle in 361 villages; peasants came from the districts of Hama and Homs; immigrant 795 Circassians established four villages north of the town of Selemiya. The 312 frontier began to move outward once more, and old foggaras were cleaned 241 and repaired to give irrigation water once again. The strongest and most energetic immigrant group, the pioneers, were Ismaili, led back to their land of a thousand years ago by a group of powerful leaders. They settled first on the site of Selemiya itself about 1870. Today they number 14,000 or more, the majority living in the town and in villages to the east. They chose village sites where old foggaras could be brought into use, and for 75 years they have been extending the area of irrigated land by the restoration of old canals and the digging of new ones. In the last 20 years subsistence agriculture, depending largely on unirrigated grain farming, has given way before a more intensive commercial system, typified by the growing of irrigated cash crops such as seed onions and cotton on individualized holdings. [457] The government has granted money for canal cleaning and swamp drainage. All these factors have contributed to extension of irrigation.

312 Some old canals, however, are still derelict. Some are so ruined that the [464] cost of repair would be prohibitive. Others may yet be brought back into use, but the will to work is weaker than in the early days of colonization, and now laborers' wages and other expenses have increased. Elsewhere village boundaries cut across old canals. Landowners of the village where a canal rises are loath to let the water flow away to the lands of another village, and thus ancient foggara systems which were perfectly related to the physical environment have been partly replaced by more local schemes of surface canal and ditch irrigation. For example, the canals that rise in Moufaqqar (Fig. 3) could irrigate land and drive mills in Moufaqqar, Tell et Tout, and Selemiya, but they have been so modified that the water is used only in Moufaqqar, and some of it runs to waste. A canal which rises in Tell et Tout but which formerly flowed on to Selemiya land has been blocked, so that its water irrigates Tell et Tout land only.

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113 [10] C.-F. Volney: Travels through Egypt and Syria, in the Years 1783, 1784 & 1785, translated from the French, 2 vols., New York, 1798; reference in Vol. 2, pp. 90-91.

of unusual disorder a considerable volume of trade was always carried along one or other of the roads.

This world trade has meant much to Syria. It has brought her wealth. It has given her inhabitants an occupation; until recently much of the trade not only passed through Syria but was handled in its passage by Syrian merchants. This has affected the nature of the Syrian towns, the caravan towns on the routes and the bazaar towns at the end of them. They have been cosmopolitan, the meeting-places of worlds, and their inhabitants have become quick-minded and flexible.

Trade has also affected the political history of Syria. Again and again powerful rulers in the neighbouring regions have stretched their hands over Syria, to tap the wealth of her cities and her routes. Often they have also desired to use her agricultural and forest resources. At other times it has been her strategic position which has tempted them; they have wanted to use her either as a defence-post against rivals or enemies in other neighbouring countries, or else as a bridge across which their armies could pass to attack those countries. The armies, like the caravans, have trodden immemorial paths. They have come sometimes up the Palestinian coast from Egypt; sometimes across the Euphrates from Mesopotamia or beyond; once, and most memorably, from Arabia; but most often from Asia Minor by way of gaps in the mountain barriers between Cilicia and northern Syria. Thus it has come about that for great parts of her history, Syria has been a province of an Empire larger than herself. On the whole, these have been the times of her greatest prosperity. Often she has been not only a part of an Empire or a world, but also its frontier.

Besides the movements of goods and armies, there has been a third movement, that of population. As a consequence of trade or war, or for other reasons, immigrants have flowed into Syria throughout history. There has been a trickle from Egypt and the Mediterranean countries, a larger stream from Anatolia, and occasional inrushes from central Asia; but above all there has been an uninterrupted flow from the Arabian peninsula. Not only individuals but whole tribes have come in. Nomads of Arabia have moved northwards and westwards, either because means of subsistence in the peninsula were insufficient or else under the attraction of plunder; from preying upon the cultivated land of Syria they have gradually

that process which has been going on since the beginning of history. But in the steppe and desert country where pasturing is possible and cultivation impossible, the Beduin still have an important part to play.

3

Approximately one-third of the population lives in towns. There are three towns, Beirut, Damascus and Aleppo, with between 200,000 and 300,000 inhabitants each; five others —Homs, Hama, Tripoli, Latakia and Dair az-Zur—with between 20,000 and 100,000. The inhabitants are mainly occupied in commerce and industry.

The structure of industry is changing more rapidly than that of agriculture. A two-fold change is taking place. On the one hand, the traditional textile, metal and other industries, which used to supply the needs of a great part of Ottoman Asia and the Arabian peninsula, are being killed by the Westernization of taste and by the competition of cheap Western and Japanese goods. On the other, modern industries are slowly being created, especially in the three principal towns, Damascus, Aleppo and Beirut. Their development has been hampered by paucity of raw materials, the scarcity of capital and to a lesser extent of technical skill, competition from Europe, America and lately from Japan, the smallness of the internal and the absence of an external market. The modern industrial equipment of the country is still confined to a small number of factories for foodstuffs, textile goods and certain other products for the internal market. The silk industry of Lebanon, which was important until it was overwhelmed by foreign competition and the introduction of artificial silk, has had a partial revival during the last few years.

Not only the industrial but the whole economic development of the country is handicapped by inadequate communications. There is only one modern port, Beirut, which has been developed by French capital and enterprise, and through which flows the bulk of the country's external trade. Tripoli is important as the terminus of one branch of the oil pipe-line from Iraq, but it does not yet possess adequate harbour-works; Latakia is small and undeveloped. The railway system, mainly built and administered by a French concessionary company, includes only a little over a thousand kilometres of track. Passengers and goods are carried

795 the standard of living and education among the Alawis and
648 to develop their corporate consciousness; and who believe that if this is to be done the Alawis must be given a separate administration specially adapted to their needs and under benevolent foreign tutelage. There are others who admit the importance of these tasks but who emphasize that it is equally necessary to give the Alawis a consciousness of being part of the Arab nation as an alternative to sectarianism and to a paralysing localism. Among the Alawis themselves, one party adheres to the former school of thought, a second to the latter, but the greater number are suspicious of all interference from outside and wish only to be left alone.

Here, as in Jebel Druze, great social and intellectual processes are beginning of which the results have yet to appear. But it will probably take longer to bring Alawi society to a point where it becomes possible to face the problem of its definitive political status.

II

311 The problem of the Jazirah, the north-eastern province
167 of Syria, is in many ways different from that of Jebel Druze and the Alawi territory. Before the War of 1914–1918 it was largely an empty district, except for Beduin tribes and some Kurdish villages. The land was sparsely cultivated where it was cultivated at all; life was insecure and government scarcely existed. When the French occupied Syria they established a considerable measure of public security, and this increased the attraction for settlers which the Jazirah already possessed by virtue of its fertility. The French authorities encouraged the settlement of members of Christian and other minorities who had been forced to leave their dwellings in Turkey, or who preferred not to live in the predominantly Moslem parts of Syria. In the last twenty years many thousands of Armenians, Jacobites and Syrian Catholics, together with Assyrians from Iraq after the events of 1933, have moved into the province; and even larger numbers of Kurdish Moslems, dislodged from their homes in Eastern Turkey by the policy of forcible assimilation
361 adopted by the Turkish Government. The new towns of
311 Hassetche and Qamishli and new villages have been created and new crops introduced, and the district has been opened up to regular commerce. The Beduin have been controlled AND CERTAIN TRIBES AMONG THEM PERSUADED TO SETTLE ON THE LAND.

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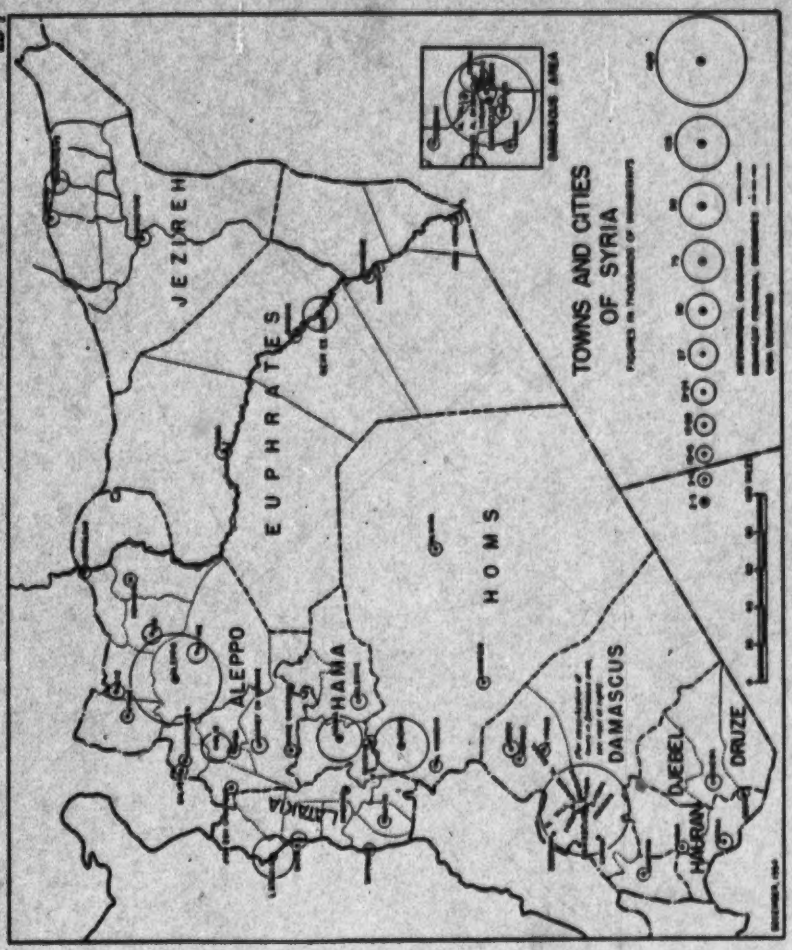

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of a manager with experience in the operation and maintenance of mechanical equipment. In the first few years at least the services of this unit should be made available to cultivators at rates high enough to cover cost of amortization and operation. As and when the farmers acquire experience with machinery and develop a community spirit conducive to cooperative action, steps should be taken to transfer the equipment in whole or in part to cooperatives.

The government should utilize the opportunity afforded by such new settlements to raise the standard of agricultural practices above the average. A government agricultural worker or community leader should be assigned to each settlement. It cannot be expected, of course, that optimum farm practices will be adopted, particularly by Bedouin settlers. It is possible, however, to provide guidance and even, perhaps, to prescribe certain crop rotations. In the dry-farming communities wheat will obviously be the principal crop, but winter vetch and such legumes as lentils, chick peas and soya beans should also be part of the cropping scheme. From 5 to 10 hectares might be left fallow each year. Another 5-10 hectares of each farmer's allotment might well be put into approved pasture. Each settler should be provided with about 60 sheep which should give a return nearly equal to that derived from crops. For the irrigated areas much more intensive cultivation, with a minimum of fallow, should of course be envisaged. The emphasis should be on such summer crops as cotton, sugar beets, peanuts, maize, beans and vegetables grown in proper rotation. Here the use of fertilizers and insecticides will have to be especially encouraged. A few cattle should be kept on the basis of the fodder provided by some of the suggested crops.

Each settlement should be small enough so that the remotest farm would be no farther than an hour's walk from the village, and large enough to warrant the establishment of minimum community services such as a well, a mosque or church, a school and a community center. The first consideration is important only in determining the size of a dry-farming settlement and would point to a settlement with an area no larger than about 5,500 hectares. On such a dry-farming area 120 families, including 10 non-farming families, could be settled initially; and the total might ultimately be about double if the land first held in reserve as pasture were subsequently allocated to new families. Even a settlement of 120 families, with a total population of 600-720, could support minimum community facilities. For the irrigated areas, where land allotments would

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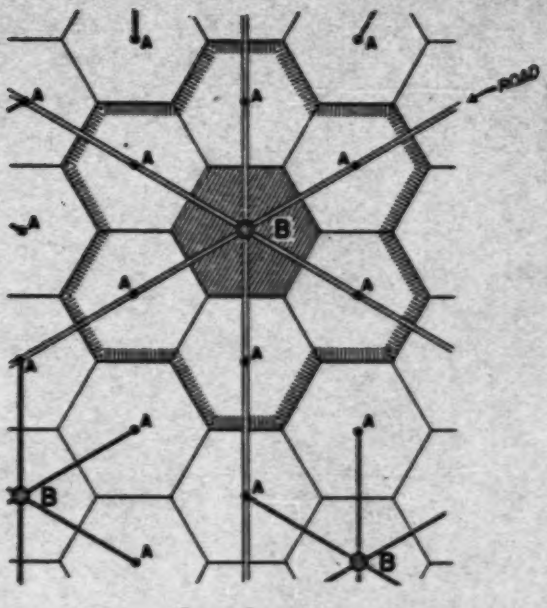
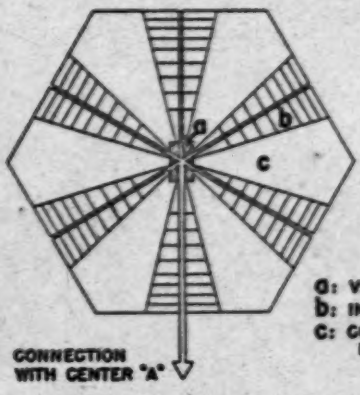


DIAGRAM 1
SCHEMATIC RELATIONSHIP OF DRY-FARMING COMMUNITIES



a: VILLAGE
b: INDIVIDUAL FARMS
c: COMMUNITY LAND FOR GRAZING

DIAGRAM 2
LAYOUT OF COMMUNITY "B"
(20 Hectare Farms)

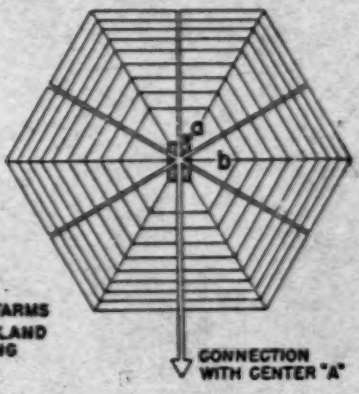


DIAGRAM 3
LAYOUT OF COMMUNITY "B"
(50 Hectare Farms)

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423 be much smaller, the minimum size of a community might be raised to
166 around 300 families, including some 30 non-farming families. Such a larger
244 community would economize capital invested in common services. Even
361 on irrigated land, however, circumstances might dictate the establishment of a smaller community with a provision for subsequent growth if the potentialities of the land warrant it.

A settlement should be laid out in such a way as to make access to farm land convenient and to fit into adjoining settlements of a similar type. For the dry-farming area settlement units shaped like hexagons would in principle be ideal. (See Diagrams 1-3.) In such a unit the farms could be laid out at an angle to six roads radiating from the center and parallel to the sides of the hexagon. Between the farms radiating from the roads the land initially reserved as common pasture would be located. One of the six roads would link the settlement with other communities. A number of hexagonal settlements would fit well together. It must be recognized, however, that modifications in this basic hexagonal unit will often be necessary, owing to marked variations in the quality of the soil or the topography, the relationship of the area to existing settlements and other factors. (For examples, see Diagrams 4-6.) In the irrigated regions the shape of the settlement will be largely determined by the layout of the irrigation system, so that the hexagon may well have to yield to the square as the more practical form.

In areas where a number of settlements are established the relationship of the new communities to each other and to existing settlements in adjoining areas must be carefully considered. For the Roudj, for example, the mission would suggest the establishment of about five communities, of which four would be purely agricultural and one would serve also as a minor marketing and administrative center and therefore be somewhat larger. (See Map 6.) A major center need not be envisaged in view of the proximity of the towns of Idlib and Jisr ech Chogour. For the more extensive region of the Ghab a similiar pattern can be contemplated; and the planning will need to be based on the assumption that Jisr ech Chogour, situated at the northern end of the area, will become the regional marketing and administrative center.

The mission strongly recommends the village-type of settlement. Any other type which would house the settlers on their own farms would not only be contrary to tradition, but would be destructive of community life and make it difficult to supply the needed community services. The village

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DIAGRAM 4
ALTERATION OF FARM DIVISIONS IN THE CASE OF VARIATIONS IN THE QUALITIES OF SOIL

a: VILLAGE
b: INDIVIDUAL FARMING
c: IRRIGATED AREA

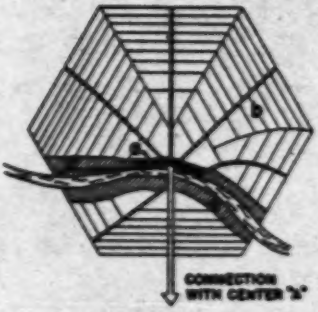

DIAGRAM 5
LAYOUT OF COMMUNITY WITH STREAM

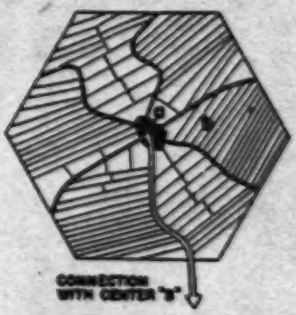

DIAGRAM 6
LAYOUT OF COMMUNITY WITH DIFFERENT TOPOGRAPHIC CONTOURS

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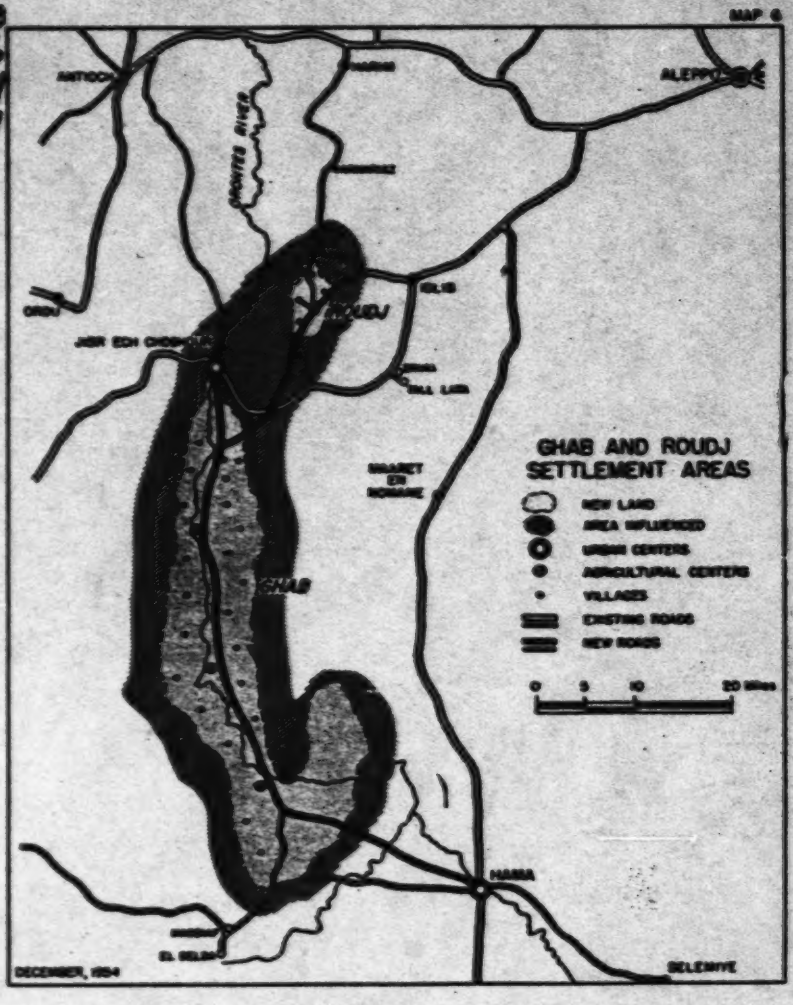

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should be located in the center of the settlement area and laid out along a rectangular pattern with the community facilities and open public places in the middle. It would be desirable to have the village surrounded by a small garden area and a belt of trees.

The settlement must, of course, be considered "model", but not in the sense that its standards and costs are so high as to render its general adoption prohibitively expensive. The settlers should be expected to contribute their own labor to its initial construction and the subsequent gradual expansion and improvement of its facilities. This will help to reduce costs and give the settlers a sense of pride and achievement in the establishment of the community. For example, the ultimate aim might be to provide a farm family with a 5-room house (3 main rooms, kitchen and laundry-lavatory), enclosed courtyard, storehouse and stables.[10] Initially, however, it would suffice to provide a 2-room unit without some of the elements in the final building. The cost could thus be kept to about £S 1,500, to which the settler might contribute £S 800 in the form of properly supervised self-help. Each farm family will need, however, a minimum sustenance allowance of approximately £S 1,000 to tide it over the first year when the community is in the course of construction and little is produced. Such an allowance should be paid out in the form of compensation for labor services provided by the settlers.

The mission has estimated the cash investment outlay in the different types of settlements as follows (in Syrian pounds):

	Dry farming settlement (120 families)		Irrigated area settlement (310 families)
	Non-mechanized	Mechanized	
Housing for farm families	77,000	77,000	191,100
Housing and shops for non-farm families	20,000	20,000	67,000
Community facilities[a]	71,000	71,000	182,000
Draft power, livestock and implements	318,000	514,000[b]	341,250
Sustenance allowance	110,000	110,000	273,000
Total	596,000	792,000	1,054,350

[a] Including schools, mosques (or churches), community centers, water supply and roads.
[b] Including £S 250,000 for mechanized equipment.

[10] See Annex I, p. 468.

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The mission suggests that the state Agricultural Bank finance the housing and means of production (other than mechanized equipment) under loans to be amortized over a 10-year and three- to four-year period respectively. The government itself should be responsible for providing the funds necessary for community facilities, mechanized equipment and payment of the sustenance allowance.

The mission's calculations indicate that the average farm family should be able to earn a net annual income of around £S 2,000 in the dry-farming communities and of over £S 3,000 in the irrigated-area communities even during the period when loans are being repaid. This should leave a small margin for the payment for land in the dry-farming areas and a substantial margin for the necessary payments for land and water in the irrigated areas. The mission believes it a sound principle to require some payment even for non-irrigated state domain. The price of land, however, should be such that the settler can expect to become a full owner within a reasonable period, e.g., no more than 10 to 15 years.

Certain conditions will need to be enforced in settling peasants on the land. For example, title should not be transferred until all payments have been completed, and in the intervening period the government should reserve the right to remove settlers who prove to be clearly unsuitable or do not till their own land. Even after title has been transferred, the government might well retain for a specified period the right to veto all proposed sales, mortgages or leases, in order to safeguard the fundamental objective of establishing and maintaining independent peasant proprietors.

During the next five years the government will have to undertake the settlement of the Roudj and a portion of the Ghab. For the settlement of Bedouins the mission recommends the establishment of two experimental dry-farming communities, one of which would be mechanized, in the Jezireh. The mission must emphasize, however, that the latter two experiments are bound to fail unless the government allocates to them good land situated in a region with adequate rainfall. Both the Roudj and the Jezireh projects will provide much valuable experience useful in extending the settlement effort. In addition the government might well undertake one project in the Djebel es Smaane northwest of Aleppo and another in the Djebel Druze. The ruins of many once imposing cities testify that the first region flourished from the first to the seventh century of the Christian era, and recent evidence indicates that this prosperity was primarily founded on orchards and vineyards. More recently people have been

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CHAPTER 8

COMMUNITY PLANNING AND COMMUNITY SERVICES

In the field of community or municipal development Syria faces a number of challenging problems. Among these are the establishment of new rural settlements; rational planning of the physical development of cities and towns; the improvement of housing; the provision of community services such as water supply, electricity, waste disposal, streets and sidewalks; the location and planning of public buildings serving the community; and the introduction of social welfare services into cities. Elsewhere in this report we have dealt with the new rural settlements and with electricity supply, municipal transport and housing. Here we shall discuss briefly some of the remaining problems.

Town Planning

One of the first steps to be taken in the direction of improving community life is to work out plans according to which towns and cities can develop in an orderly and rational fashion. Town planning is not an expensive luxury, a means of realizing monumental buildings, impressive public squares, broad avenues and large public parks. It is rather an instrument for insuring that the large sums which must inevitably be invested in any human settlements not merely serve the needs of the moment but are conceived with a view to future requirements. The haphazard growth of towns and cities sooner or later leads to communications problems, overcrowding and slums, inadequacies in public services and other conditions which are wasteful of human and material resources.

Few Syrian cities have as yet adequate plans. Damascus has the longest experience in this field, and the development of the modern city, which is in many respects admirable, testifies to the utility of planning. Particularly noteworthy in recent years has been the redevelopment of the western part of the city, including the western entrance to Damascus, the provision of adequate streets and open spaces, and the removal of tanneries from the old city to a special industrial zone on the outskirts. The Damascus

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341 plan has one defect in common with those of other cities: it fails to make adequate provision for the location of housing for the less well-to-do classes within the confines of the city.

Aleppo has expanded in a much less orderly way than Damascus. Although a city plan was drawn up after the second World War, it is not based on an adequate topographic survey and reveals so many deficiencies that its total revision appears to be required. Of the smaller cities, Latakia has the best plan; it takes into account the need not only to reform the old city but to develop neighborhoods for community living. A few other towns such as Deir ez Zor, Hama and Homs have plans, but these for the most part envisage little amelioration except perhaps from the standpoint of communications.

In general most of the plans have been inspired too much by transport requirements and too little by the objective of improving the conditions of urban living. More attention must be paid to the zoning of districts for housing, industry and shops and bazaars, to the interrelationship of living quarters and centers of employment, and to the location of gardens, schools, hospitals and other public buildings in such a way as to make them most accessible to the community they are designed to serve. Within the larger cities it is important to plan community living also around neighborhood units which in certain respects can be self-contained and can help to decentralize the city.

345 *Community Facilities*[38]

Municipal investment in such facilities as streets and sidewalks, water supply, sewers, lighting and libraries has averaged a little over £S 12 million a year during the period 1949-54. In addition the central government has made available almost £S 30 million to enable Aleppo to install an entirely new water supply system, and has spent between £S 200,000 and £S 300,000 annually on the exploration of water for villages in the Hauran and the Djebel Druze.

A program for municipal investment can hardly be drawn up without a careful assessment of the needs of municipalities and their ability to meet them. In view of the limited resources available, however, the volume of investment can increase only gradually, to perhaps £S 16 million in

[38] See Annex I, p. 470.

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Urban Social Welfare

368 It seems desirable in the near future to inaugurate some social welfare work in the urban areas as a counterpart of the proposed community work in the rural areas. Initially this will have to be on a modest and experimental scale. We suggest that over the next six years 8 to 10 centers be established to serve as focal points for voluntary community activities. About £S 350,000 might be allocated for investment in such centers, and £S 120,000 for operating expenditures. The centers would provide facilities for reading, radio listening, community meetings, adult education courses and eventually even for community baths. It would be advisable to combine the community hall as far as possible with the traditional school building; we therefore recommend that all new schools be constructed as all-purpose buildings which can serve children during the day and adults at night. The centers might well be put in the charge of selected teachers who would receive some special training in social work.

We would stress particularly that this modest program is experimental in character. Experience with the first centers will demonstrate how useful they can be, what needs they must serve and how they can best meet these needs.

Public Buildings[37]

653 361 Public buildings are, of course, prominent features in most settlements of any size. They must be properly planned and fitted into town planning schemes so that they will be of maximum service to the government and the community. Elsewhere in this report we have discussed building requirements for agriculture, education, health and similiar special purposes. Any development program should also take into account the probable outlays on buildings of a general administrative character. The mission, however, had very little basis on which to project investment expenditures on government buildings of this kind. During the period 1949-53 the Ministry of Public Works spent on an average about £S 1 million on the construction of public buildings for purposes other than agriculture, education and health. The mission thought it advisable to assume that such expenditures would rise in the future and has accord-

[37] See Annex I, p. 472.

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ingly allowed for construction amounting to £S 8.5 million during the years 1955-60, or a little over £S 1.4 million annually.

The mission has one general observation to make regarding the responsibility for planning and constructing government buildings of all types. We believe that the Ministry of Public Works should in the future, as in the past, be responsible for designing and constructing public buildings. On the other hand, the various ministries and government agencies for which the buildings are to be built should be in the position of programming their own requirements. We have already had occasion to stress this in connection with public health facilities but it applies generally. Each ministry or independent government agency which requires a more or less continuous building program should have at least one or two officers charged with the task of anticipating building requirements. Proposals for new construction and appropriate budget allocations should come from the ministries concerned. Once they are approved, it is the task of the Ministry of Public Works to design and construct the building. Final approval of the design should also rest with the initiating ministries or agencies since only they will be able to judge whether the proposed design meets their needs.

A Housing and Settlements Administration

In this and previous chapters we have envisaged that the government will play an increasingly prominent role with respect to the establishment of new rural settlements, urban housing and town planning. These are in the main new functions for the Syrian government and at present it is hardly equipped to discharge them. A new organization with a specially trained staff will be necessary. An independent agency set up for this purpose would have the task of (1) providing technical assistance to municipalities in town planning and related fields, and (2) planning and coordinating the work in housing and settlement.

The planning must be on two levels: on a broad national and regional scale, keeping in mind population trends and the interaction between economic development and the geographic distribution of population, and on a more detailed local scale, involving particular settlement projects.

Regarding the first of these planning functions, we do not suggest that the agency should be charged with drawing up the economic development program. It must keep under constant study, however, the impact which

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privately and publicly generated economic development will have on the distribution of the population and must anticipate what problems it will pose in terms of growth of municipalities and their needs, and in terms of regional transport and other requirements. It would also study comparative population pressures on the land and recommend how these might best be relieved through the development of idle or under-utilized land and the establishment of new settlements. Its findings and recommendations would permit timely revisions in the content and direction of a public development program.

With respect to the second planning function, the proposed agency would prepare in detail the settlement schemes for the Ghab, the Roudj and the dry-farming areas we have proposed. It is important that one organization have the responsibility for planning and coordinating this settlement work. Only in this way will it be possible to economize on the expert staff required and to apply the experience gained in one settlement scheme to subsequent projects. Thus the agency would plan in detail the layout of the settlement, the community facilities to be provided, the type and design of housing and methods of construction, the communications among the new settlements or between new settlements and existing communities, the principles governing the selection of settlers and the terms on which they would be settled, etc. Within the framework of such a plan, the actual carrying out of various phases of the settlement work should be left as far as possible to existing ministries and departments. Thus the Ministry of Interior in consultation with the Ministry of Agriculture would select the settlers in accordance with the recommended criteria; the Ministry of Public Works would cooperate with the settlers in the construction of housing, community facilities and roads; and the Agricultural Bank would finance the necessary housing and equipment of the settlers. Even in the planning of the settlements, the proposed agency should consult freely with the ministries concerned. It would, however, retain over-all direction in order to ensure that the work by all interested parties is properly carried out and coordinated.

In the field of housing and town planning, the new agency's functions would be similar in character. It would lay down the general directions along which the proposed building research station would work. The housing funds made available by the government would be distributed among municipalities in accordance with the recommendations and terms and conditions which it would frame. It would provide technical assistance

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to municipalities in drawing up and revising town planning schemes.

For this agency we envisage a status comparable to that of the agency in charge of the rural community development program. It should be headed by a competent, well-paid director directly responsible to the prime minister and the cabinet. A part of its top staff of experts initially would have to be recruited abroad. In view of its responsibility for a vital segment of the development program, it should have a budget of around £S 600,000 a year to which the government might contribute £S 500,000 and the municipalities £S 100,000.

Proposed Expenditures

The recommendations which we have made in this chapter would entail a total government outlay of £S 24.95 million over the six-year period 1955-60, distributed as follows (in thousands of Syrian pounds):

	Total	Average annua
Water supply	13,000	2,167
Urban social welfare	450	75
Public buildings (general)	8,500	1,417
Housing and Settlements Administration	3,000	500
Total	24,950	4,159

These proposed expenditures are exclusive of those which would be undertaken by the municipalities.

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652 to become self-supporting," involving particularly UNRWA participation
648 "in the economic development of the host countries, thus making it possible for the refugees and the countries in which they live to benefit jointly by the combination of available rehabilitation funds and those from other sources."[42] The uncertainties regarding Syria's acceptance of these UNRWA funds are such, however, that we have not assumed that they will actually be used.

Municipal Financing

361 A brief word should be said regarding the financing of development
652 expenditures by the municipalities. In a number of places in this report we have suggested that certain expenditures be shouldered by municipalities. We have envisaged municipal investment expenditures in housing, schools and community facilities totaling about £S 103 million for the six-year period. This implies an annual outlay of around £S 17 million, compared to a probable average of some £S 12 million in recent years (exclusive of expenditures on Aleppo water supply). We have provided for part of this sum by recommending that the central government allocate £S 8 million for community water supplies (exclusive of Aleppo). Thus the municipalities will have to find a net sum of between £S 4 million and £S 5 million per year for additional investment.

Unfortunately no comprehensive information was available in Syria on actual municipal expenditures and receipts. The budgets of all municipalities were reported to have risen from £S 24.4 million in 1949 to £S 29.6 million in 1952 and further to £S 37.6 million in 1953. Data obtained by the mission from a scattering of municipalities indicate that municipal revenues—which are derived both from local taxes and surcharges on certain national taxes—have increased rather rapidly. This lends support to the tentative belief that the municipalities can bear the additional proposed expenditures, although probably only if they are not required to reduce the outstanding amount of existing indebtedness. We strongly recommend, however, that the government undertake a survey of municipal finances with a view to determining whether the municipalities can actually meet their future requirements.

[42] See U.N. General Assembly A/2717/Add. 1, 5 November 1954.

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ANNEX I
NOTES ON SETTLEMENTS AND SOCIAL SERVICES

1 INTRODUCTION

Syria's 3.65 million people dwell in an estimated 8,265 settlements, of which about 61% are towns and villages and the rest farms. Only Damascus, Aleppo, Homs, Hama, Deir ez Zor and Latakia can be said to be preponderantly urban; the remaining communities have fairly evenly balanced urban and rural characteristics or else are clearly agricultural. About 23% of Syria's population lives in Damascus and Aleppo, 17% in 21 other cities of more than 10,000 inhabitants, 6% in 31 mixed settlements and over 50% in agricultural settlements. A little less than 3% is nomadic.

But the character of Syria's settlements is changing and the picture presented above will probably not be accurate for long. People of the mountain regions are slowly moving down to the plains. Both urban and rural settlements are being established in areas newly opened to cultivation, such as the Jezireh, the Ghab and the Roudj. The achievement of political independence started a trend toward urbanization, stimulated by construction of new roads and development of motorized transport.

Despite a considerable postwar building boom, there are probably fewer buildings in relation to the population in Syria than in most other countries. Although the exact number of dwelling units is not known, it probably does not exceed 350,000 or approximately one for every 10 inhabitants. In recent years new construction has been at a high rate. In 1953, for example, the number of housing units probably increased by about 5.15%. While this is substantially in excess of the normal increase in the population, account should be taken of the fact that the newer dwelling units probably do not house on the average more than six people. On this basis, only about 8% of the new construction, or some 1,460 units, were available for replacement of existing housing. In the postwar period the demand for housing has been stimulated by the rise in population, the wartime building lag, the growth of the foreign community, the return of expatriate Syrians, changes in the geographical distribution of population and the tendency of patriarchal families to break up into simple

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362 families requiring one dwelling each. While the need for a high and even higher rate of construction in the future is undeniable, it is doubtful that the factors which have operated to create an effective demand for housing will altogether be as effective in the future. Some decline in building over the coming years may well take place.

345 361 Community services have not kept pace with construction. Damascus and Aleppo have been most nearly provided with the essential streets, water supply and sewerage facilities, but the medium-sized and the small communities are very badly serviced. Except for water supply, this is not yet a problem for the small settlements, but it is serious for the medium-sized centers with their motorized transport and denser populations. The social services—education, public health, social welfare and community development—are likewise not yet adequately developed in Syria, but the country is commendably aware of the need and in the field of education, at least, has increased its expenditures impressively in the last few years. A few of the larger municipalities take care of their community services and have undertaken town-planning, but the central government, through the Ministry of Public Works, merely serves as technical advisor to the municipalities. There is no central government department with responsibility for housing. And while there are ministries for education and public health, no government department is responsible for social welfare or community development programs and no such programs exist. The administrative organizations in these fields clearly need strengthening.

Investment in Settlements

657 361 Over 60% of Syria's total annual investment is estimated to go into settlements, for housing, community and social services, and other purposes. During 1949-53 this type of investment averaged £S 138 million annually, of which £S 15 million (almost 11%) was from public funds and £S 123 million (89%) was private investment. On the basis of a 3.65 million population the annual investment in this sector was £S 39.4 per capita, of which £S 35.1 represents private funds.

[362] Perhaps as much as 80% of the private investment and about 72% of the total investment in settlements goes into housing; the balance is divided between industrial and commercial buildings, in that order. Private building activity reached an all-time high in 1953.

Of public investment in settlements, 80% is municip[illegible] and only 20%

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governmental, representing 8.7% and 2.2%, respectively, of total investment in settlements. Municipal investment is directed to water supply,[1] roads, power plants and distribution networks and sewerage facilities, in that order; very little goes for housing. Government investment is primarily in buildings, chiefly for education and public health purposes.

The mission has assumed, in preparing its proposed program for settlements and social services, that the estimated 1954 population of 3.65 million will increase over the next five years at a rate of only 1.5% annually, rather than the 2% rate of recent years. If the program is to be properly adjusted to Syria's needs, however, a population census and an improvement in the collection and organization of vital statistics are urgently needed. Better public health conditions, economic development, opening of new areas and new lines of transport and communications, changes in social patterns—all will bring about major changes in size and distribution of the population over the next few years. Any policy developed for the settlements should be planned with an eye not only to the immediate future but also to the longer term economic, social and cultural development of the country.

II EDUCATION

A PROGRESS TO DATE

For centuries, and especially during the years of foreign occupation, the only formal educational facilities were the Koranic schools, which concentrated on religious teaching. A decline in the number of these schools began about 150 years ago, and with it a gradual change in their curriculum; today about one-third of the time is devoted to religion. Meanwhile the number and significance of state primary schools has been increasing. In these, during the French occupation, the pattern of education was influenced by traditional French systems.

Since independence, Syria has started to develop its education at a faster rate and to give it a Syro-Arabic pattern. The effort of these few years and the success achieved is impressive. The budget of the Ministry of Education rose from almost £S 17 million in 1946 to £S 36.8 million in 1953, and its share of the total budget increased from 13.5% to 17.7% (in 1923 it had been only 9.1% and in 1931 9.8%). Between 1946 and 1953 the

[1] Water supplies in Damascus and Aleppo, however, are financed by government funds.

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362 invited for building lots, only one-fourth of the land was taken up because it was too expensive and too inaccessible.

We have given some attention to the possibility of establishing a mortgage bank to assist in financing private building in the cities. We believe that such an institution will ultimately be desirable and necessary, but, owing to limitations of funds, we have not recommended that one be established before 1961. Meanwhile, the project might well be studied. Any mortgage bank that might ultimately be created should be designed primarily to help finance low-cost housing, particularly since the construction of housing for the more well-to-do elements in the population has apparently not been significantly hampered by lack of funds.

The possibility of gradually abandoning existing rent controls should also be studied. The elimination of rent control on new building might be a suitable first step and might have the incidental advantage of discouraging the continuous influx of new people into the urban areas.

361 v COMMUNITY SERVICES

The mission's provision of an average annual investment of £S 14.3 million for community services must be regarded as extremely tentative. In the last analysis, no final program can be recommended until a thorough analysis of municipal finances is completed. At present, comprehensive data on municipal expenditures and anticipated financial resources are lacking. We suggest that a study of this subject be undertaken promptly, so that the magnitude of a program of municipal services can be determined in the light of the municipalities' own resources and the contribution which the central government can make to them either by loans or by grants.

Roads and Streets

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The construction of roads and streets has been second in importance among municipal programs. Except in the large cities, paving is generally limited to a few central streets because of its cost.

Hereafter the construction and maintenance of all types of roads connecting settlements, including the portions passing through the settlements, should be the financial responsibility of the central government. Municipalities, freed of this burden on their budgets, should take care to spend

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their road funds on types of pavement suitable to the needs of the locality, choosing those methods which make greatest use of local materials and hand labor and depend least on machinery and imported materials. Stone-paved roads, of which there are excellent examples in Syria, probably provide the answer for most of the settlements where stone is readily available, and the government should be able to provide asphalt to most communities. Many of the roads in villages, particularly those which do not carry motor vehicle traffic, could be improved through cooperative community endeavor, and this should be one of the objectives of the community development program we have recommended.

Electricity

Electricity is of economic importance to those communities which depend upon it for productive power and not merely for light. The mission recognizes fully the significant developing influence which the availability of electric power can have upon a community. Useful though it is, however, we suggest that a major effort to provide electric power primarily for lighting be deferred until the more urgent problems of water supply and sewerage have received attention.

Landscaping

Syria's broad and nearly waterless steppes have led to cities and villages virtually without trees, a situation to which the devastation of the first World War contributed greatly. Even cities like Damascus, lacking neither greenery nor water, have large areas which remain bare. The planting of trees, especially shade trees for the streets, should be a concern for all Syrian settlements. This, of course, calls for a study of the most suitable types of trees for the different regions, and the establishment of nurseries, as recommended in Chapter 3 of the Main Report.

Local committees should do the planting, once the problem of water supply has been met. Where streets are narrow, there is much to be said in favor of planting trees inside the house plots so that the inhabitants themselves will take care of them; the trees will then shade the streets without taking up needed road space. In recently planned areas where the streets may be unnecessarily wide, a strip on either side might be turned over to the people living on the street on condition that it be planted with

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861 trees and not built upon. Possibly in this way the broad, deserted unpaved streets, swept by the winter winds and burning under the summer sun, can be transformed into long garden avenues without any heavy expenditure by the local authorities.

VI PUBLIC BUILDINGS

658

Direction of Investment

Out of a total of about £S 25 million expended on public buildings between 1948 and 1954, £S 9 million was for public health structures while more than £S 7.5 million was invested in schools and a like sum on administrative buildings.[7]

The proportion spent for administrative buildings has been high and is attributable to the organizational needs of the newly independent country. We have assumed that the rate of construction of such buildings is likely to increase, but we suggest that no more than £S 750,000 be expended during 1955-56 while a critical survey of the most urgent requirements in this category is being prepared. In 1957 the expenditure may reach £S 1 million, rising to £S 2.5 million in 1960 and making a total of £S 8.5 million over the six years. The resulting average of £S 1.417 million would in fact be about 50% higher than the average of recent years.

The total expenditure for public buildings, including schools, public health buildings and other types, is likely to average £S 7 million annually, assuming that the municipalities and other authorities share the cost of schools. Compared with the effort of the past few years, which was at a level of £S 4.5 million a year, this would be an increase of about 60% to 70% per year.

Policy

In the Main Report the mission has recommended that in future the Ministry of Public Works be responsible for design and construction of all public buildings, relying on each government agency to specify and draw up its own special requirements. It may be necessary, especially at the beginning of the program, to engage a private firm of Syrian or foreign

[7] Including buildings for the judicial and security services.

361 We shall have to consider town planning in
172 greater detail

in connection with Damascus and Aleppo. For the moment, we would merely deplore the fact that the authors of extension and development plans are all too apt to write off ancient monuments as undesirable, instead of considering them as items of the finest and most attractive focus-points around which to explan districts. The preservation and enhancement of these buildings need be no bar to a city's normal development. They merely raise problems which should always be studied in consultation with qualified experts sur ;hed to the Directorate of Antiquities. If the work is done, with good taste, it will help not only to interest a few scholars anxious to learn more of the past, but to develop a love of their monuments in the inhabitants themselves, as they come consciously or unconsciously to appreciate their beauty, and, in a short time, take them as an essential and familiar ornament to their daily life.

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16: Collart et al G-8 (1956) 1954 MD1 Syria MD1

DAMASCUS

GROWTH OF THE CITY

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Lying on the edge of the desert and encircled by the green Ghutah oasis, watered by the Barada, Damascus owes its existence and development mainly to its geographical position, water supplies and gardens. The different periods of its growth which are bound up with its political history, industries and trade, are reflected in the layout of the various sections of the town, and in the architecture of its houses, monuments and streets.

The nucleus of the present city was formed at the time of Syria's annexation to Alexander's Empire. The Greek city, rising to the east of the Aramaean town, was built to a regular plan of rectangular blocks about 150 by 330 feet, showing considerable regard for town planning requirements; the layout may, in fact, even today, still be regarded as an ideal one.

Damascus's association with the Roman Empire gave a decisive impetus to the formation and development of the town. Most of the great rebuilding operations were carried out in the reigns of Septimius Severus and Caracalla. The relative importance of the various streets depended at that time upon their position in relation to the city gates. Bab Charqi is a part of the ancient East Gate, which stood at the end of the "Street called Straight" (*Via Recta*), on the site of which one of the bays of a monumental arch has recently been reconstructed. All round the Great Mosque there are many remains of the temple of Jupiter Damascenus (identified by the Romans with the god Hadad). To the west, in particular, there is the high Corinthian colonnade of one of the propylaea of the peribolos, with beautiful fragments of the arcature and entablature.

Damascus remained a satellite of Rome and then of Byzantium until the arrival of the Arabs, who, under the Omayyad dynasty, made it the capital of a great empire, the political, cultural and religious centre of Islam. The heart of the city was the Great Mosque, built by the Caliph al-Walid on the site of the ancient temple and the church of Saint John the Baptist. The Syrian architects adapted their plan to the whole area, incorporating some parts of the earlier buildings in the new edifice. The immense courtyard and the sanctuary were

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16: Collart et al G-5 (1953) 1954 MD1 Syria MD1
MAASOPS
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adorned with all the splendour of Constantinople's mosaics and the products of her art industries. The mosque was considered as one of the world's architectural masterpieces, rivalling the mosque of Omar in Jerusalem. 361 175

With the rise of the Abbasid dynasty, Damascus lost its position as the capital; the work of the Omayyads was destroyed and their institutions proscribed. In order to subjugate the population more effectively and prevent any show of hostility, the fortified walls of the city were pulled down. This was a period of anarchy and unrest, which resulted in the formation of cliques and the development of guild life. The city ceased to be a single whole, governed by public authorities responsible for the management of the community's assets; it was split up into autonomous districts, like dissimilar, and often rival, cities, each with its own independent organization, mosque, hammam (baths), soup, surrounding walls and gates, and its own chief (sheikh) commanding a sort of police battalion.

This situation led to the development of a new system of property and a new type of city life; new bodies were formed to defend the rights of various religious communities or corporations.

AYYUBID PERIOD

The Seljuk Atabegs and the Ayyubids, in their zealous desire to see Sunnite Islam victorious and their hatred of the Fatimites and Crusaders, made Damascus once more an intellectual and religious centre, as well as a stronghold. Whereas the town's division into various districts had previously been based on craftsmen's corporations, religious creed was henceforth the determining factor; the Christians drew together and shut themselves away to the south-east of the old town; the Israelites to the south-east; the Moslem section of the population settled in the western part of the town, where many madrasahs and public buildings were then built. There, also, stood the Citadel, for whose building part of the materials and foundations of the Roman walls were used. The city was further

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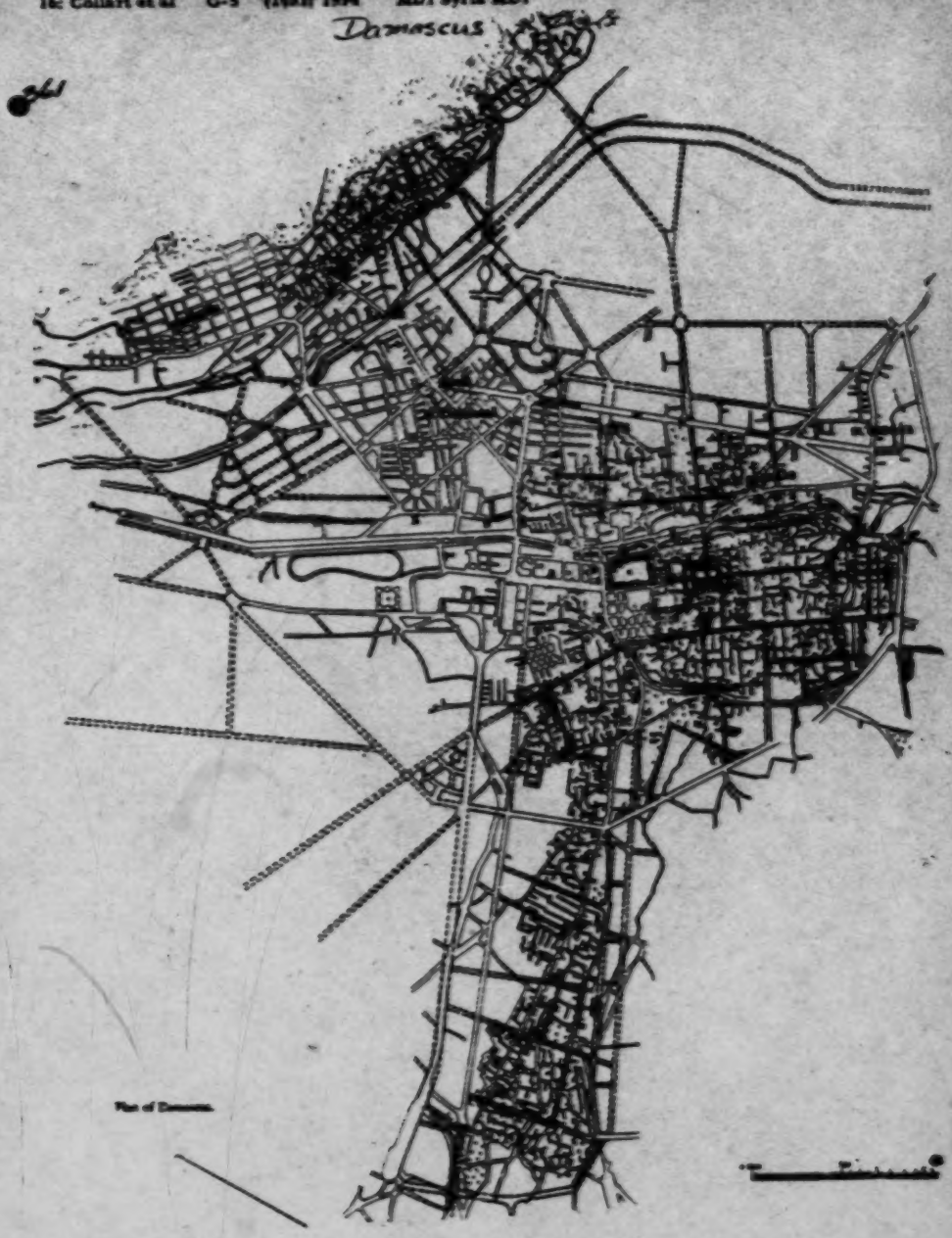
Damascus



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361 broken up by the formation of new districts, often at some dis-
175 tance from the original town centre. In isolated parts and on the slopes of the mountain, where nature is conducive to prayer and meditation, many convents and madrasahs were erected; although several of these have been destroyed and others are disused and in ruins, about fifty have survived until the present time, while others again have been converted and incorporated in more recent buildings.

361 In the Moslem sector of the old town is the Maristan of
344 Nur ad-Din, "one of the most famous hospitals of the Moslem
172 world". It is of great architectural interest, but is unfortunately spoilt by the modern buildings which now surround it. The doorway has a rich and original alveolate decoration, a classical pediment and a beautiful pair of doors. Over the entrance hall is a small ribbed ceiling dome, surmounted by a sort of truncated conical drum, made up of superimposed alveoles which are visible even from the outside, as in the case of the brick tomb of Zobeide near Baghdad. In the courtyard, with its two beautiful iwans (halls), fragments of inscriptions, lattice-work and marble inlay have been preserved.

361 The Nuriya Madrasah, to the south of the Great Mosque,
346 has a similar dome above the mausoleum. Its doorway is
172 distinguished by the pendant keystone motif, also to be seen at the Adiliya Madrasah, a "masterpiece of stereotomy and bonding" planned and constructed in the architectural style and by the methods characteristic of northern Syria. This latter madrasah, a fitting building for the headquarters of the Arab Academy, has been very carefully restored and rearranged. This building, together with the Zahiriya Madrasah (now the National Library), the house of Saladin's father, which was converted by the Sultan Beibars into a memorial college, and the Aziziya Madrasah (Saladin's tomb) form a fine architectural group to the north of the Great Mosque; these buildings are still adorned by a wealth of ancient works of art, inscriptions, mosaics, doors and windows.

The twofold influence of Mesopotamia and northern Syria can be seen in the art of the period of Nur ad-Din and Saladin.

Various mausolea are to be found outside the old town itself and slightly to the north, in the area between the river and the modern thoroughfare called Baghdad Street. That of Zayn ad-Din (Sitt ech-Châm, 1172), is the oldest example of such a building with a sepulchral dome surmounting two drums; the "Sultan Hasan" Mausoleum has a ribbed dome and an interesting decoration of stucco and painting; the Chamiya Madrasah, standing outside the city walls, contains one of the finest examples of plaster moulding in Damascus, beautiful inscriptions and the armatures of the old leaded-glass windows. The Mausoleum of Ibn al-Moqaddam, Emir of Aleppo, is a typical north Syrian structure. Further to the east and of more recent date stands the As-Tawba Mosque, planned and arranged on the same lines as the Omayyad Mosque, and interesting on account of its architecture and decoration (doorway, mihrab, leaded-glass windows, etc.).

The suburb of Salihiyah grew up on the mountain side round a fine group of mausolea, madrasahs and convents, most of which are now abandoned or used for somewhat unsuitable purposes. There, in a picturesque spot on the Nahr Yazid, we find the remains of a colonnaded portico of the oldest convent-madrasah of Salihiyah, together with a whole series of monuments built by eminent persons at the court of Nur ad-Din and Saladin. Most of them are mausolea with brick domes, some ribbed and others double, surmounting two drums decorated with arcading and lobate or twin niches. Many of them contain beautiful carved wooden tombs, old leaded-glass windows and

361 lintels decorated with graceful inscriptions and coats of arms.
346 The Mouaffari Mosque, built in 1202, is decorated in a par-
172 ticularly interesting and original manner; it is the oldest Ayyubid Mosque, and its plan is reminiscent of the Omayyad Mosque. Ancient columns, with their capitals, have been used to form the arcades round the courtyard. The carved wooden lintels (with incised geometrical designs) over the seven doors of the prayer hall are well preserved; two of them are still surmounted by plaster lattice-work. Inside, several windows have beautiful old glass panes.

Also worthy of mention is the Atabakiya Madrasah, built to house the tomb of Princess Tarkan-Khatoun, with its fine doorway decorated with alveoles, which today, owing to the concealment of the corner colums by more recent structures, looks as if it were in recess. The arrangement of the alveoles, the bonding of the arch-stones of the arcade and the modelling of the cornices show originality, but are somewhat primitive.

This part of the town subsequently developed and spread very considerably, taking in neighbouring districts such as the Kurd quarter, in Saladin's time, and the Mohadjirine at the end of the nineteenth century. Today, this suburb centres round the Mohiy ad-Din Mosque, built by Sultan Selim in 1518 over the tomb of the famous mystic. This mosque, which also contains the tomb of Abd el-Kader, has a beautiful minaret and very striking faience decorations.

MAMELUKE PERIOD

361 At the beginning of the Mameluke period, Damascus developed
195 and expanded further; its products were highly esteemed and, in order to meet the demands of the time, the city developed its art industries, specializing in luxury articles. Even the Crusades promoted its commercial relations with the Western world; like Aleppo, Damascus traded with southern France, Genoa, Pisa and Venice. Its artistic products, such as silks, bronze ornaments, Damascene blades, enamel-work and glassware were in demand everywhere. As a result of this commercial activity, its suqs spread to the north of the Citadel, in the horse-market area, where the Yelbogha Mosque was built in 1264.

Following the example of the Sultans of Cairo, governors, military leaders and their servants then built a great many madrasahs (schools for the teaching of the Koran) and mausolea. The favourite sites for the latter were along the road to Mecca "so that the founder might benefit from the prayers of passing pilgrims". Thus a new suburb, called the meidan, sprang up along this road, reflecting the special features of the pilgrim traffic and trade. The meidan, about two miles in length, was linked with the city by a new group of suqs (Es-Sinaniyeh) outside the western gate of the wall, between the districts of Chagur and Qasr el-Hajjaj; it absorbed the suburban village of El-Qbeybat ("little domes"), and ended at Bab-Allah (Allah's Gate), whence pilgrims "set out on their journey to the Holy House of God".

361 It would take too long to give a complete list of the Mame-
346 luke monuments existing in these districts; even the directory
172 of the Antiquities Service does not include them all. Very often a minaret, a fountain or a madrasah, although not classified, is of considerable interest, because it adds to the atmosphere of the place, or because it has certain original features, though these are often not very obvious, owing to the conversion of the building for another purpose or to bad restoration.

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Here, we shall mention only a few monuments which are particularly unusual or significant. Such, for example, is the Turba Afridouiya ("Jami el-Ajami"), at the city end of the meidan, a Koranic school and mausoleum commemorating the Persian trader, Afridun, who died in 1348. The composition of its façade, with black and white courses of masonry, is perfect, and all the decorative elements hit in harmoniously with it. There are a great many of the latter (cornices, bull's eye windows, doorway with inlaid work and scallops, stalactite ornamentation, inscriptions, interlocking voussoirs and panels of strapwork), and several of them were subsequently repeated, for purely ornamental purposes, in other buildings.

A little further south, there is a small mausoleum to an unknown person, which is commonly called "Weli Chaybani". Its architecture is sober and its composition good. As in the majority of these monuments, the façade, with its skilful boarding, has a doorway decorated with alveoles. The two windows are connected by a single lintel, composed of three rows of stones, the middle one being formed of interlocking voussoirs; there is a bull's eye above the pilaster separating them. The dome, resting on a high drum with 16 windows, is pierced with holes to let in light.

Nearly half-way along the meidan stands the double mausoleum of Araq, belonging to the same period (1349). The plan of this building is more complicated. Its many-coloured façade has turquoise-blue faience inlay round the doorway, with its ornamentation of stalactites and braid-moulding. Here also, the sloping surfaces are gracefully joined to the vertical by a system of alveoles, and the long fascia of the lintels divides the façade horizontally with its two-coloured arrangement of interlocking voussoirs, repeated right across the building and sloping first one way and then the other. The many radiating voussoirs of the bull's eyes form as it were the rays of a sunburst. The lintels are enriched with geometrical and floral designs, and cyma reversa mouldings give unity to the various parts of the façade.

The architectural and decorative elements used with a very strong sense of balance and harmony in these buildings, were later repeated and multiplied until surfaces became so richly adorned as to give the impression of incoherence and pointlessness, combined with artistic decadence, which is characteristic of the last Mameluke period.

The Yachbak Mausoleum (1377), more ornate, but still well designed and balanced, has domes surmounting sloping roofs composed of alveoles. The central feature of the façade is a doorway decorated with stalactites, and the rosettes of the bull's eyes form a horizontal band, matched, within the embrasure of the doorway, by a panel decorated with marble and faience inlaid work in an interlaced design, surrounding the Mameluke coat of arms.

The same features are to be seen in the Rachidiyé Madrasah, the upper part of whose doorway has recently been cut off to make room for an entirely extraneous small structure; the fine composition of the façade is also partially concealed by modern buildings.

Among the latest buildings of the Mameluke period, the Sabuniya Madrasah, the Sibaiya Madrasah at the western end of the "Street called Straight", and the Al-Muradiya Madrasah deserve mention. Prominently situated, with the curves of their domes and the tall shafts of their beautiful minarets, they add a special and typical note of their own to the street scene.

A few other monuments of the same period are to be found either in the old town or in the districts immediately to the north of it. We have already mentioned the Yelbogha Mosque,

361 designed on the same lines as the Omayyad Mosque; it is remarkable for the beautiful structure of its niches and windows with their alveolate decoration, its magnificent bands of plaster moulding, and its windows, doorways and minaret. This mosque well deserves to be set off to greater advantage.

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Tingiz, the Viceroy of Syria, was responsible for the construction of a fine group of buildings. Only the beautiful minaret and two doorways of the mosque which bears his name still remain after the rebuilding of the An-Nasr Avenue, but the double mausoleum of his w[illegible] (Turba Kukabaiya) and, a little further on, the Dar al-Hadir, a school where the traditions of the Prophet were expounded, are still to be seen in the "Street called Straight".

The last monuments of this period are the two beautiful tiered minarets in the Bab Jabiya suq, with their rich decoration, and that of the Al-Moallaq Mosque, with an unbroken line of black stones encircling its niches and rose windows.

OTTOMAN PERIOD

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The end of the Mameluke period was marked by a serious economic crisis, aggravated by disturbances and devastation (Tamerlane), and also by the Portuguese discoveries, which altered the traditional trade routes. With the rise of the Ottoman Empire, which expanded Damascus's economic and political frontiers, the city again began to develop. Under the capitulations, Turkish ports were opened to European merchants. Moreover, since pilgrims set out from Damascus on their journey to Mecca, the city was expected to supply them with the necessary equipment and provisions for their crossing of the desert.

These circumstances led to the building of many khans, with their porticoed courtyards, shops and stables on the ground floor and accommodation for travellers on the floor above. The city was no longer of any strategic or military importance; the ramparts, already useless on account of the town's extension and the formation of suburbs without the walls, were abandoned; the moats filled in and the Citadel fell into ruins. The pasha (governor), with his entourage of Turkish aristocrats, took up his residence and administered business at the seraglio, outside the ramparts, at a place called Qanawat (the canals), near the Roman aqueduct.

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In the same neighbourhood were erected the two great imperial madrasahs, the Solaymaniya (1554), constructed by the famous Turkish architect, Sinan, who built the Sulaymaniya in Constantinople, and the Salimiya (1566), designed by a Persian architect. With their great buttressed domes, surrounded by a double row of small domes covering the porticoes and rooms, their slender pencil-like minarets tapering to a cone, and the surrounding gardens with their fountains, trees and flowers, they achieve an architectural unity and a highly characteristic atmosphere of their own, in a style native to Constantinople and readily transplanted to Damascus.

The Solaymaniya has a rich variety of architectural and decorative motifs, characteristic of that period and style, such as marble inlaid work and great overlays of faience tiles on the walls and tympana of the doors and windows; keel arches with alternate black and white arch-stones; abundant use of stalactites, niches ornamented with overlapping shell designs, lintels with many-coloured interlocking voussoirs, forming increasingly ornate and complicated patterns. The capitals

16: Collart et al G-5 (1953) 1954 MDI Syrie 1983

Damascus

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Damascus in the eleventh century.[1]

(From J. Sauvaget, Revue des Études Islamiques, IV, 1934)

Damascus today.

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361 consist of clustered tetrahedrons, coloured with blue and red.
346 The astragals of the columns and their tori are of gilt bronze.
172 All the surfaces are composed of alternating courses of different colours.

The same features are to be seen in the buildings put up by the governor, Dervish-Pasha, forming a fine group at the beginning of the Pilgrims' Way, to the west of the old town. The façade of the "Ed-Derwichiyeh" Mosque is composed of alternate black and white courses; the tall polygonal minaret is painted green. The whole building, which is surmounted by a large dome encircled by small cupolas, is architecturally connected with the neighbouring mausoleum by an archway over the road. The arrangement of designs, shapes and colours on the façades shows extraordinary imaginative ingenuity. The pointed bulbous dome of the mausoleum rests on a drum of irregular shape. At a later date, in the same street, but a little further south, Sinan-Pasha built his mosque among the suqs of Bab Jabiya; it has the same characteristics and features (minaret faced with green faience tiles, large dome, inflected arches, geometrical capitals, etc.); above all, it makes the same spectacular impression in the street surrounding, inevitably catching the eye between the suqs and the Mecca road.

361 Within the confines of the old town, between the Great
342 Mosque and the "Street called Straight", a number of khans
172 and two new hammams were built at this period.

Dervish-Pasha built the "Khan Al-Harir", which is a curious mixture of Syrian and Turkish architectural styles. It is a fine structure, with porticoes surrounding the courtyard and, on the upper floor, two series of rooms connected by a corridor and covered by a triple row of domes.

The Khan Al-Gumrok, in the same locality, has a covered hall instead of a central courtyard, and six large domes supported on pendentives. The Khan Soleyman-Pasha (1732), following a similar but more complicated plan, has a courtyard covered by two large domes. Here, the composition is conceived on broader lines and the architectural volumes are enormous, while the dual colour scheme is still found, not only in the black and white courses of the walls, but also in the bonding of the voussoirs of the arcades and pendentives. Some years later, Asad-Pasha, who was Vali (governor) of Damascus and led the great pilgrimage for 14 years running, built a new khan, and a house for himself between it and the Great Mosque.

The khan has a façade reminiscent of Venetian Renaissance architecture in composition, while the building technique and the choice of decorative motifs and materials are in the best artistic traditions of northern Syria. Asad-Pasha's residence ("Azem Palace", 1749) has the same features, repeated and multiplied; it follows the traditional plan of all large Syrian dwellings, with its two entirely separate groups of rooms (selamlik [men's quarters] and haremlik [women's quarters]), its courtyards, porticoes, iwans, pools and fountains.

Thus Damascus today, as in the earliest periods of its history, is still assimilating and using artistic and cultural themes, borne along the great traffic routes, to converge upon the oasis between the Anti-Lebanon and the desert.

PRESENTATION OF MONUMENTS

361 In studying the growth of Damascus and its various districts,
172 we have tried to bring out the character and functions of certain groups of buildings which, if skilfully restored and arranged,

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would not only be more beautiful in themselves, but would add to the interest and attraction of the city as a whole. It must be borne in mind that, in old towns, there is more to safeguard than isolated monuments which can be protected by law: there is a whole architectural system, moulded by time, a crystallization, as it were, of the people's history, customs and needs.

A monument always has some positive, intrinsic interest as a work of art, but it is of even greater interest if it forms part of a whole group of buildings, which makes its purpose and history clearer and sets off its volumes and form. In the architectural pattern of a city, each individual building is like a piece in a mosaic; however precious each small stone may be, it is the whole composition which gives it meaning and worth.

It is true, of course, that there are also worthless things in the old parts of towns; there are buildings which are parasitic or unhealthy. Like a living creature, an old city is subject to sickness and infirmity. The correction of such shortcomings, however, calls for infinite care and an exact appreciation of what is to be altered or abolished; and in any case, the work must always be done with the caution which modern critical methods of restoration and excavation require. It is impossible to say, *a priori*, what should be done, or to map out new streets, building lines and squares with ruler and compasses. The demolition of an old quarter may reveal buildings, fragments and works of art which will enrich the nation's archaeological heritage or throw light on historical or artistic problems. All this is of importance to a country's cultural and spiritual life. There are plenty of examples of the difficulties to which ancient monuments give rise when town planning schemes come to be carried out, even when the latter have been prepared with the intention of leaving untouched buildings protected by the law. One has only to think of the mosque of Tinqiz, of which only the two doorways and the minaret projecting over the street now remain.

We are glad to find that the new districts also have a character and beauty of their own, which is becoming increasingly marked as new buildings, in the light of past experience, are better adapted to the atmosphere, customs and climate of Damascus. Although the new streets are often too open and the architecture of the buildings sometimes either a little too rigid (the reinforced concrete construction being rather too obvious), or too ornate and showy (due to the excessive and unskilful use of decorative motifs), they will blend better with the rest of the town when the trees have grown up to fill in the over-large spaces with greenery and subdue the light.

We must admit, however, that we are somewhat dismayed by the results of the new development scheme and the new layout of building land in the area between the southern side of the Citadel and the "Street called Straight". There, the labyrinth of sugs and narrow winding alleys, with buildings jutting out into them, has gradually been replaced by a chess-board pattern of small rectangular blocks. The historic monuments are lost and stifled among many-storeyed modern buildings. The domes and minaret of the Dervish-Pasha Mosque are dwarfed by the high block of workmen's flats which has sprung up beside it. The same is true of many mausolea and of the Maristan, the famous hospital of Nur ad-Din, one of the most unusual and interesting monuments in Damascus.

It would certainly not be wise to encourage the proposal (which would, moreover, be extremely costly to carry out) that monuments be pulled down and rebuilt some distance away, as has been suggested in order to isolate the Omayyad Mosque.

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The suqs with their khans, the hammams, mosques and madrasahs generally form a coherent and harmonious architectural and functional unit, which should be kept intact. The present system of classifying monuments should be extended to cover architectural groups as well as individual buildings. We would repeat that this does not mean thwarting reasonable attempts to improve or develop a district. Our aim is merely to show that the usual criteria, methods and means employed in the technical departments of municipalities, where individual interests and immediate advantages are alone considered, should not be applied to such architectural groups. It should have been possible, for example, to prevent the erection of a conspicuously tasteless modern house, jarring in both colour and design, close to the southern façade of the Zahiriya Madrasah (National Library). The new buildings in Seleymani Street, near the Khan Al-Gumrok are another instance of the sort of thing that should not be allowed. Before putting up new building in old parts of the town, much thought should be given to their appearance and colour, with the twofold aim of improving the present situation and setting off the monuments, which are dignified and beautiful features of the city as a whole, to their best advantage. The criterion of utility cannot be ruthlessly applied to the products of culture and the mind. For that reason our young town planners should give up their attempts to recover money spent on laying out an open square with streets radiating from it or piercing wide streets, by ill-considered exploitation of building land in old parts of the town, where the present houses give very little return or by the demolition of hammams, madrasahs and gardens, which now bring in no revenue at all, in order to free their sites. 361 /172

The old centre of the town would gain greatly, both aesthetically and from the practical point of view, if the Citadel were arranged and used for a different purpose. Its interest as a monument is obvious, with its magnificent façades and towers and the beautiful east gate with its alveolate decoration. At the present time, the Citadel buildings are put to poor use as a barracks and prison. Should it be decided to use them for a different purpose, the open spaces within the walls should be used for public gardens and so brought into the life of the city. They might be some of the most beautiful gardens in Damascus, with gateways leading into the streets outside. An enterprising architect, with the help of an expert advisory committee, could well adapt the fine and imposing architecture of the Citadel to meet the needs of some public institution. It might, for example, be used to house a university faculty, with a "Students' Centre", providing accommodation for students and professors not resident in Damascus, a library, studies, lecture-rooms and exhibition halls. The mosque should again be used for prayer. Premises could also be provided for recreation and entertainment, with a cinema, café, restaurant, etc. If the western façade were cleared, there would be a really splendid and imposing view down the wide An-Nasr Avenue. Thus transformed, the Citadel, instead of hindering the town's development as it does today, would once again become a part of public life and, in its new guise, would be a great social asset to the city and the nation.

The Great Omayyad Mosque is the most interesting monument in Damascus, although unfortunately it has been so seriously damaged in the course of its history by destruction earthquakes and fire that it is now a somewhat confused mixture of unequal artistic and architectural styles. It would be excellent if sufficient funds could be found to complete and extend the work—already happily begun by the Wakfs and the Directorate of Antiquities—of restoring this monument and setting 346 /172

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361 192 such artistic treasures as the mosaics, the capitals, the Qubba, the minarets and the doors.

In the west portico, large white patches in the mosaics show how much the restoration work done still leaves to be desired. In the north-east section, as part of the careful work carried out by the Directorate of Antiquities, the spaces between the mosaics have been painted a similar colour, with excellent effect, except that the painted surface looks rather dull beside the brilliant surface of the mosaics. Better results might be obtained by mixing the paint with a little marble powder, which would give a slight variety of tone.

It is of course important in any improvement schemes, to consider the general effect of the whole—a fact appreciated by the technical services, which have made plans for building new roads so as to isolate the Great Mosque. In considering these plans, we must bear in mind that the Great Mosque is not simply a building standing by itself: its history and use create an aura influencing the surrounding atmosphere and architecture; the imposing ruins of ancient temples and churches mausoles, madrasahs, khans and suqs form a complex with it.

344 192 To the north there are no less than five highly important monuments. The Adiliya Madrasah (Arab Academy), with its fine doorway and pendant hexagons, has been described as "a masterpiece of stereotomy and bonding". The Zahiriya Madrasah (National Library) opposite, once the house of Saladin's father, was converted into a memorial college by the famous Sultan Beibars. Close by the Great Mosque, the Aziziya Madrasah contains the tomb of Saladin, housed in a mausoleum with the characteristic ribbed dome resting on octagonal and sixteen-sided drums. The recent restoration of this mausoleum has been outstandingly successful, especially as regards the enhancement of the general effect of the surroundings. Opposite the north entrance, the Jaqmaqiya Madrasah and the Turbat Al-Ikhsaiya, stand like propylaea, guiding the eye to the fine vista of the Byzantine colonnade, the doorway and the minaret.

361 344 192 The monuments on the other sides of the mosque are interesting too, though less obviously so. The artistic interest of some of the khans, suqs and hammams is often apt to pass unnoticed by the casual observer simply because they are still in use, whereas that of the ruins strikes the eye immediately. The architecture of the group of buildings to the south-west of the Great Mosque, however, is extremely good. Passing through the Khan Al-Gumrok with its six large domes supported by pendentives, and the great Khan Al-Harir, with its triple series of small domes surmounting the first storey, we reach first the rich and delightful Azem Palace, a very suitable setting for the folk museum and tourist offices which are to be installed there; and then, after passing the fine façade of the Khan Asad-Pasha, the Midhat-Pasha suq ("Street called Straight"). The development plan includes the widening of this street. If this is done, we hope that due precautions will be taken to avoid the mistakes mentioned above, and that the present character of this street will be preserved, particularly in the western section, where the suqs are still teeming with life and interest. We might at this point stress how very convenient the suqs are, especially in extremes of weather; they protect the crowd of pedestrians from rain and sun, wind and dust alike. They form a dense network, opening out,

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261 from time to time, onto vistas of monuments—such as the beautiful minarets of the Hisham Mosque and the Madanet el-Qali, and the façades and domes of the Sibaiya Madrasah and the Derwish-Pasha and Sinan-Pasha mosques—which serve as landmarks.

We might well go on to consider the special interest and characteristics of the suburbs of the meidan (with the fine Bab-Saghir cemetery), Suq-Sârouja and Salihiyah, but we dwelt on this subject at some length in describing their history, and there would be no point in repeating our remarks on the importance of preserving the characteristic atmosphere of these places.

Finally, in order to avoid any possibility of misunderstanding, we should like once more to draw the attention of young town planning experts, who lay so much store by wide, straight streets, to the importance of preserving the picturesque, as we have advocated, and of catering for the tourist trade which, for a city with so rich an artistic heritage, is a considerable potential source of income.

There are, in our opinion, few other towns of comparable romantic and picturesque appeal. But we must make it clear that when we use the term "picturesque" we have in mins something which, though apparently haphazard, in fact possesses a beauty and logic of its own, since it has grown up spontaneously and naturally as the outcome of an earlier age and the reflection of a wealth of life and feeling. This explains why the various parts combine so naturally and necessarily. This quality of the "picturesque", which we believe should be preserved and enhanced, is not to be confused with the results of neglect, carelessness and dirt.

As regards the tourist trade, we do not, of course, advocate sacrificing the life and development of a city and subordinating its whole disposition to the tastes of foreigners in search of the novel and exotic. We simply wish to point out that the desire to attract tourists may provide an incentive to set off to best advantage those features of a town which truly deserve to be generally known, admired and appreciated.

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ALEPPO

ARCHITECTURAL CHARACTERISTICS OF THE TOWN

The Citadel of Aleppo, with its deep moat, and steep and grandiose glacis held in place by stone columns, etches a lacy crown around the hill formed by the accumulated ruins of older civilizations, and is truly symbolic of the city which, throughout its long history, has weathered events that brought ruin and death everywhere around it. At its foot spreads out the serried network of thoroughfares converging from desert and sea, turned, as it were, to stone in the rational yet florid architecture of the town.

Aleppo has always been considered the key city of communication and trade. From time to time wars have halted its development, but its own peculiar logic, unity and coherence have continued, despite changes in political circumstance. In Seleucid times and later in the Roman and Byzantine period, its contacts and influence grew steadily; it then became the real metropolis of northern Syria. Antioch remained the great centre of culture; Aleppo was the city of trade, industry and manufacturing.

In the art of building too, Aleppo was always the leader, suffering no declines or lapses, able to combine the rational and geometric logic of Greek construction with the monumental design of Rome and the plastic and decorative fantasy of the Mesopotamian Orient. In contrast with the poor building materials of Mesopotamia—where sun-dried brick and mud were used—Aleppo had its rich resources of limestone, which it used generously, as though in passionate pursuit of an ideal to create forms and motifs suited to the requirements of architecture. It achieved a relationship between the structure of its buildings and the nature and characteristics of the stone, which was a factor in the artistic conception as a whole, just as water was in Damascus, where pools, streams and tinkling fountains lent life and movement to courts and spaces.

It is difficult, in a few words, to describe the various buildings and classify them according to their type and style. J. Sauvaget has made a detailed study of the question in connexion with the town's historical development, and has drawn

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192 gressive beautification, because the whole of its history is written in its splendid buildings. All that is needed would be to free the old buildings of the mean parasitic structures which cumber them, built against their walls or in empty spaces at a time when the authorities were negligent. It would only be necessary to restore to a seemly state and put to suitable use the numerous major monuments, such as "Sheikh Mohassin", the Nuri Maristan, the Zahiriya Madrasah—without the walls, the "Khanaqah Faraim" and that marvel of architecture, the hospital (maristan) built in 1354 by the Emir Arghun, which are either deserted or used as tenements for the poor.

764 In the cemetery of "Es-Salihin", which has been holy ground
192 for centuries, with a sacred rock traditionally associated with Abraham, there are many tombs dating back to the end of the twelfth century, some used as dwellings, others abandoned and half buried. The variety of their architecture and the beauty of the inscriptions on them make them of great interest, and it would be enough to rail them in, clear them and plant a few trees to convert a waste land into a formal park rich with monuments of the past.

The same is true of the tombs in the cemetery of the Maqamat, to the east of the Kamiliya Madrasah—without the walls; the madrasah too requires no more, by way of treatment, than the unbricking of the sanctuary door.

● 361 Other noteworthy structures which need clearing of the
172 parasitic buildings that have grown up in and around them are the lovely city gates (Bab Antakiya, Bab an-Nasr, "Bab el-Hadid") and the façades, entrances and courtyards of the Urduenur, Es-Sabun and Qurd-Beg khans.

A proper layout of the approaches to the ramparts between Bab al-Jinan and Bab Qinnasrin, and the demolition of a few run-down shops, would create one of the finest promenades imaginable, with impressive views of the walls and façades of the Mameluke towers.

In any scheme of reconstruction and beautification, consideration must also be given to fine private houses. At present, the Ghazzaleh House is being put to rather unsuitable use as a school and worse still, is threatened with demolition. In our view, a suitable use could be found for one or other of these lovely seventeenth- and eighteenth-century residences, as also, perhaps, for one of the khans, as a club or hotel providing amenities for tourists. Aleppo would thus offer its guests a combination of creature comforts and an incomparable artistic setting.

THE CITY IMPROVEMENT SCHEME

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In 1931, at the request of the municipality of Aleppo, a French architect, Mr. A. Gutton, of the Institut d'Urbanisme in Paris, submitted plans for improvements and new building in the city, with a report setting out the criteria followed.

In their present form, these plans must be regarded as the bare bones of a scheme to meet the requirements of the modern town and the wishes of its authorities. The real key is in the report, where we find the explanation of the ends sought and the means selected to achieve them. One of its more significant passages is that which points out that, while giving the fullest weight to new human and social requirements, it is essential to grasp "the historical value of each quarter or each particular building and, in terms of that, to decide either on its preservation as it stands or on its improvement and clearing"

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Noting the key importance of the suqs, the author advises non-interference with arrangements which are the growth of centuries and still serve a useful purpose today: "The approaches to serve the khans, which supply the suqs and are the normal staging points between wholesaler and retailer, must be planned to link up with the existing internal thoroughfares and approach lanes of each khan and its traditionally satellite suqs."

The author suggests separate streets for motor traffic and foot passengers, and advocates keeping shops off the new main arteries. The various zones are classified as residential, commercial or manufacturing, in the light of the city's life and the nature of the ground, and it is made clear that, "on the plans, the purpose of the notation 'site for public and administrative buildings', without further particulars, is to reserve these sites for public purposes, without making any commitment as to their precise use".

The serraglio is made the focal point of the civic centre, though with numerous reservations and recommendations designed to ensure the blending of the new buildings with the setting of the existing monuments (El-Iabbadiyeh hammam, and mosques of great historical and artistic importance). A point worth noting is the need for avoiding any lofty building in the neighbourhood of the Citadel. New buildings would spoil all the architectonic relationships of this area, as the example of the new serraglio, the demolition of which has been repeatedly suggested, clearly shows. The proposed buildings can be sited more freely and logically in the open spaces behind, though some new structure of limited height might be permissible in the space between the two mosques. The problem to be solved here is an architectural one, consisting in the introduction of new buildings into an existing setting with the aim of enhancing and not destroying its beauty. This consideration is implicit in the report's closing words: "The scheme as a whole must be designed to preserve the work of the past unharmed whilst striving, in the new quarters, to do even better, but in the architectural terms of our own age, not in slavish imitation of the past. Make the most of your 200 mosques and your eight miles of suqs; preserve the successive monuments bearing witness to your greatness ...".

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We are glad indeed to be able to associate ourselves with the recommendations and reservations in the report accompanying the scheme of improvements adopted by the municipality. A point we wish to stress is the need to add to the staff of the town planning services specialists (or the commission mentioned earlier), able to translate into practical terms what, in the actual plan, is suggested but not set out to the last detail.

The experience gained from the building of the new seraglio, with the ill-advised roadworks involving the destruction of the Matbakh el-Ajami (described by J. Sauvaget as "the only relic of this order existing in the Moslem East") and the mutilation of the Khan Al-Wazir ("a noteworthy collection of buildings, said to be the finest khan in Aleppo") should counsel prudence. Any work involving interference with the old quarters should be preceded by the closest study of the various factors which have gone to make them what they are. We hope it will prove possible to avoid any further disfigurement of the Khan Al-Wazir for the purpose, already announced, of compensating the property owners who have suffered loss through the widening of the street with plots carved out of the courtyard area. Anything of the kind would have the worst effect on the fine architectural balance of the khan and would be in flagrant contradiction to the principles set forth above.

The point to be remembered is that any plan for the expansion of a town must serve to lay down lines of future development which will guarantee harmony, giving due weight to all things of importance to the community. It would be useless and harmful if such a plan were carried out only in part, to serve special interests and for immediate profit.

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THE SYRIAN DESERT

311 361 The Syrian desert is not uniformly barren. There are enormous stretches of steppeland, where life is not impossible, or at least not permanently so. The winter rains, rare though they are, make the pastures green and fill the water-holes. The wandering Bedouins manage to feed their flocks all the year round; and their camps are found here and there in the desert solitudes. In some places indeed, there is sedentary as well as nomadic life; near a well or a spring a group of dwellings may be built, palm trees grow up and crops are cultivated.

The necessary conditions for the transitory development of certain sites, when circumstances are favourable, may thus be found. At certain times in history, irrigation work has been undertaken to assist crop growing and reservoirs have been dug to make permanent settlement possible. Trade has provided means of livelihood for a larger population than the products of the earth would have sufficed to maintain. Military defence requirements have led to the building of forts and castles, and the necessary supplies for those who manned them have had to be found.

487 364 This accounts for the establishment of the great desert routes, with their chains of halting-places at the only spots where the existence of natural or artificial resources made life possible. The natural route from the Persian Gulf to the Mediterranean, via the Euphrates valley to Aleppo and Antioch, was shortened by the short cut across the desert which of necessity passed through Palmyra, either continuing straight to the Homs Gap or turning south towards Damascus and Palestine. Settlements grew up, at each end of the desert route or at oases along it, or again at strategic points such as river crossings or mountain gorges, some places, indeed, fulfilling several of these conditions (e.g. Dura and Palmyra).

PALMYRA

361 Palmyra has a considerable and well-deserved fame, first for its natural beauty—abundant sulphur springs, transparent blue

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PALMYRA

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361 water, fertile gardens and palm groves, and the contrast between the flat, barren wastes of the desert stretching away to the south and the rocky mountain barrier which rises above it immediately to the north. Secondly, its fame is due to its extraordinary destiny and to the romance of its economic and political history, which made this remote oasis in the heart of the desert one of the great trade centres of ancient times and its rulers, Odainath and Zenobia, the acknowledged masters of the East—first the supporters, then the rivals of Rome and ill-fated pretenders to the dignity of empire. Lastly, its fame is due above all to the incomparable grandeur of its ruins.

361 172 The ruins of Palmyra are striking on account both of their size and of their wonderful state of preservation. From the regular chessboard pattern of the streets, still discernible inside the outer wall of the town, rise rows of columns, sanctuary precincts, porticos and steps of public buildings. Round the city lie the vast burial grounds, with their varying types of burial vaults, tombs in the form of houses, hypogea, and sepulchral towers, all of which, though violated from ancient times onwards, still retain their decorations and inscriptions as well as most of the innumerable sculptures they contained. Whole structures still remain to their full height: large sections of the main colonnade are still upright and the entablature is still supported on the pillars with their consoles; the temple of Baal, surrounded by its courtyard wall and porticos is almost intact; the sepulchral towers in which the dead mount guard along the pass leading to Homs and Damascus stand out square and sombre against the hillside, flanking the route. Crowning the mountain with its tours and redans stands the Arab castle, one of the most striking features of the landscape.

As far as the parts of the buildings which lie below the surface are concerned, excavations have shown how little they have suffered from the ravages of time, a fact accounted for by the excellent condition of the subsoil and the dryness of the climate. The freshness of the paintings inside the tombs provides an illustration. Moreover, as the ancient city is almost everywhere covered by a layer of earth 9 to 12 feet thick, even those monuments which are entirely concealed are preserved to a considerable height. Another reason is that the town rapidly fell into decay after its destruction in 273 and never regained

its former importance; buildings were seldom converted to other uses and, except for a few that later served for military purposes (such as the one now known as Diocletian's camp, or the forecourt of the temple of Baal, which was transformed into an Arab fortress in the twelfth century), the buildings were never intentionally demolished or the materials of which they were made plundered. 361 172

Thus Palmyra may be said to present ideal conditions for archaeological research, offering possibilities that will not be exhausted for a long time. After the description of the visible remains given by the German scholars who worked at Palmyra under the direction of Th. Wiegand, after H. Ingholt's systematic exploration of the burial grounds and the penetrating studies of the monuments, cults, institutions and language of the Palmyrians, made by H. Seyrig, R. Amy, D. Schlumberger, J. G. Février, J. Cantineau, J. Starcky and others, the Syrian Directorate of Antiquities worked out an admirable and extensive scheme for uncovering the entire ruins. The clearing of the agora before the war, and that of the theatre, quite recently, have shown what spectacular and instructive results may one day be gained from the scheme. The work is proceeding steadily but the task is immense and there is still plenty of scope for useful and fruitful co-operation.

A few special problems which have already arisen in connexion with the study and exploration of the Palmyra ruins are worth noting here. The monumental arch, the temple of Baal, the great colonnade and innumerable tombs, towers and hypogea required extensive restoration and consolidation. The removal of the decorative sculpture of the Yarhai hypogeum and its reconstruction in the Damascus Museum was a difficult undertaking, successfully accomplished. The bold plan adopted to allow of the uncovering of Baal's sanctuary is also worthy of note. The modern town, whose houses filled the temple precincts, was removed and rebuilt further north, beyond the boundary of the ancient city. Now, after 20 years, the whole population agrees that the step was well justified, for the new village, with its wide airy streets, affords healthier and more convenient living conditions; this may serve as an example. The only remaining inhabited building is the charming house of the Antiquities Service in the south-east corner of the precincts, where visiting archaeologists find a welcome and an atmosphere which they much appreciate.

But Palmyra is not only a city; it is the natural centre of an immense region stretching from the Anti-Lebanon mountains to the Euphrates, a region whose prospects and importance are now beginning to be realized. Along the desert routes which meet and cross within it, and where they reach the rivers, are other sites, marking wayside centres which existed at various times in history. In such places, quite impressive remains have survived to the present day.

THE TWO QASR EL-HEIR

As D. Schlumberger has pointed out in a recent work, Palmyra was once less isolated than is generally believed. Other inhabited centres within the area prospered beside the metropolis. In the plains there were oases made fertile by large-scale irrigation schemes; in the mountains to the north-west, shepherds' villages, made habitable by the construction of reservoirs which provided adequate water supplies for the summer months. These villages did not survive the fall of Palmyra and the region 361 172 344

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was subsequently completely abandoned. However, the dams and aqueducts built during the Roman period were still useful in later times to the Byzantines and Arabs. They made it possible to build the two great castles to the west and east of Palmyra which bear the same name and now stand ruined in the midst of an expanse of desert. They were formerly surrounded by walled gardens and had been designed to serve both as palaces and fortresses.

Built by the Caliph Hisham in 727, Qasr-el-Heir el-Gharbi was a luxurious residence. A tall Byzantine tower marks the site of the ruins from afar. All that remains of the Arab palace is the lower masonry of the walls, which were of freestone; they were uncovered between 1936 and 1938 by D. Schlumberger. His excavations not only laid bare the plan of the palace, which was a square flanked by towers, surrounding a central courtyard with porticos and a single entrance. They also brought to light innumerable remnants of a stucco and fresco decoration which is the most original and complete example of Omayyad art in Syria.

Qasr el-Heir es-Charki, also built by Hisham in 729 near a still older fortification that is now in a very ruined state, has walls and towers standing almost intact up to their full height. The upper part of those on either side of the entrance is decorated with a design of arches supported on small columns; the others have a simpler decoration of ornamental courses of brick. The main doorway has a semi-circular tympanum with machicolations overhead.

Though similar in layout and belonging to the same period, the two Qasr el-Heir presented different problems for the Antiquities Service. With the former, it was a matter of discovering and preserving the precious and fragile decoration, which was picked up in fragments at the foot of the walls; it took several years of patient and highly skilled work to remove it and piece it together in the Damascus Museum, where it is now one of the principal exhibits. In the case of the latter, it was necessary to underpin the walls and towers whose foundations had been undermined by damp and desert winds; the maintenance and supply of a group of workers on an isolated, waterless site such as this was a difficult matter. The work has been successfully begun and is to be continued shortly.

RESAFA

Resafa is another of Caliph Hisham's castles, laid out in the form of a square with a central courtyard, defensive wall and towers; it was located and excavated in 1952, by the German mission under Mrs. K. Otto-Dorn, among the remains of a great Moslem centre. The Caliph died and was buried there.

Up to that time, Resafa had been known chiefly for the Christian monuments that had been built inside its great walls; they are of great interest in the history of art and architecture in northern Syria from the fifth to the seventh century of our era. The largest and best preserved is the basilica of St. Sergius, the plan of which has recently been reconstituted by J. Kollwitz in the light of his excavation work; the structure is said to date from the second half of the fifth century. The remains of the martyry and a second great basilica are still partially hidden; excavation is revealing the beautiful carvings of the semi-domed apses and the capitals and arches. There are also a few smaller buildings and, outside the walls, a funerary

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chapel. The peculiar nature of the crystalline stone of these buildings gives them a very distinctive stamp.

The rich ornamentation of the northern doorway of the enclosure, with its five arches of different sizes supported on columns is also remarkable; in structure and style it has been compared to certain parts of Diocletian's palace at Split.

The size of the buildings and the extent and isolation of the site make Resafa a difficult place to explore. It is gratifying to know that work has now been resumed and it is to be hoped that it will soon be possible to continue it on a large scale.

THE VALLEY OF THE EUPHRATES

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The Euphrates route must also be considered while we are speaking of the desert routes; it too is marked at intervals by large fortified enclosures, built at different times at points where the tracks fanning out from Palmyra crossed the river. Dura and Raqqa are among the best known of these fortifications.

Dura-Europos (Es-Salihiyeh) is a Seleucid foundation dating from the end of the fourth century B.C. Occupied by the Parthians and later by the Romans, it was at that time closely dependant upon Palmyra. It was captured and destroyed by the Sassanids in A.D. 256. The town is situated on a plateau above the Euphrates flanked by two narrow ravines. Guarding the river crossing, and at the same time a caravan city and river port, it held a position of great strategic and economic importance. It was not until 1921, with the chance discovery of the paintings from the temple of the Palmyrene gods, now in the Damascus Museum, that attention was drawn to the site. Its investigation was begun by F. Cumont and continued by Yale University under the direction of M. I. Rostovtzeff. On the traditional Greek chessboard street plan of the town, a number of buildings were located and excavated, including 11 temples, two small sanctuaries, a Christian church, a synagogue, the market, several baths and numerous houses. The many treasures found included groups of frescoes from the church and synagogue, now reconstructed and preserved at Yale and Damascus respectively.

Although the Greek and Roman town at Raqqa was of some importance in its time, it is the Moslem remains of the new town, Al-Rafiqa, founded in 772 by the Caliph Al-Mansur which have monopolized attention. The Baghdad gate with its brickwork decoration and the twelfth-century mosque with its arches and round minaret are the most striking monuments. Quite recently the Syrian Directorate of Antiquities began a search for the remains of the palaces which, in the ninth century, were a favourite residence of the Abbassid dynasty. The excavations, carried out by Nassib Saliby, brought to ligh in 1952, at a spot about two miles north of the city wall, a large group of buildings containing many rooms and formerly surrounded by gardens. A Kufic inscription bearing the name

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●361 172 of the Caliph Al-Mutasim has been found there, besides fragments of stucco work, frescoes, glassware and glazed ceramics. This is but a part of a very large built area which will be systematically explored.

A word must also be said of Mari (Tell Hariri), another town on the river, which, 3,000 years before Dura, occupied a comparable position some 25 miles further south; everyone has heard of the extraordinary treasures found there since 1932 by the French mission under A. Parrot, which include statues, jewellery, mother-of-pearl mosaics and inscribed tablets. These are preserved at Aleppo and the Louvre and the most recent finds are at present on view in the exhibition at the Damascus Museum. Other notable sites are the triangular fortifications of Halibiyeh, the ancient Zenobia, built in Roman times, with its serried chain of towers, to guard the narrow pass running along the Euphrates at the foot of a high basalt cliff, and Meskené, the ancient Baïs, with its high brick minaret, at the junction of the route from Antioch and Aleppo with the river valley.

The Mesopotamian method of building with sun-dried brick, which was more or less generally employed, and the extent and isolation of the sites make it questionable whether it would be worth while to undertake costly maintenance and consolidation work. At Mari, Dura and Raqqa the treasures found are of greater interest than the buildings; once the excavations have been completed, plans drawn and photographs taken, the ruins can be left to their fate. It will then be the task of museums and publications to make them live once more.

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THE VALLEY OF THE ORONTES

The study of the coastal region must be extended to the valley of the Orontes which, geographically and historically, forms its eastern limit. A natural channel between the Alawite chain and the limestone plateau, it forms part of the long depression running from south to north behind the Lebanon. Scattered along the course of the Orontes, too, are the strong citadels by which the Arabs sought, successfully, to stem the advance of the Crusaders—Baalbek, Homs, Hama, Caesaria, Kalat-el-Mudik—all interesting and beautiful, in varying degrees.

Two very different sites must be mentioned.

On the vast field of ruins of Apamea, overlooking the marshy plain formed by the river, the scattered fragments of that ancient city's monuments are still to be seen. It is being explored by the Belgian expedition which has been led in turn by F. Mayence and H. Lacoste. The ground is strewn with plinths, entablatures, and the shafts of wreathed columns. The line of the great colonnade and the ground plans of various buildings are still easily recognizable.

The charm of Hama, with its green gardens and high, wailing waterwheels, must not distract us from two interesting monuments, well worthy of close study: the Great Mosque, with its two minarets of different periods, its arcaded courtyard and white domes, still showing signs of what it was at an earlier date, and the Azem Palace, with the graceful arches of its upper courtyard, its ornamented windows, its great domed hall of state (dating from 1778), lavishly although a little too heavily decorated. The atmosphere of the old town is a happy foil to the life on the banks of the river and helps to give Hama great attraction for the visitor.

ANCIENT SITES

However beautiful or famous they may be, the ancient sites of the coastal region need not here be dealt with at length in

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16: Collart et al G-5 (1953) 1954 MD1 Syria MD1

N THE NORTH

CHARACTERISTICS OF CERTAIN SITES

The region of the limestone plateau, which is bounded on the west by the cleft formed by the valleys of the Orontes and the Afrin, includes a few fertile plains, but taken as a whole, it is simply a vast mountainous tract of bare rock, fissured and worn. The sites are scattered on the ridges and slopes and only by building water-tanks was it possible for the people to maintain life. They can be divided into three groups: to the north, the Jebel Seman; in the centre, the Jebel Barisha and the Jebel el-Ala; to the south, the Jebel Zawiyé or the Jebel Riha. In certain places there are so many ancient centres that their ruins can be seen on all sides.

These towns frequently grew up around a monastery. The monastic life was widely practised in Syria at an early date and huge groups of buildings were put up to meet religious needs. Every convent was also a centre of agricultural work requiring additional buildings, as at Breig and Deir Turmanin. Some were also places of pilgrimage, where inns, bazaars and hostelries were built for the pious who flocked thither, as they did, for instance, to the convents of Qalaat Seman and Deir Seman, hallowed by the memory of the famous Stylite.

In other cases farms, a church and oil presses, sometimes covering a large area, grew up around an agricultural town; Bamuqqa Qirqbize and Behyo are excellent examples. Elsewhere, there were villages with substantial houses, as at Réfadé and Kafer Nabo, or with more modest dwellings, as at Qatura and Taqlé. Everywhere, the remains of churches can be distinguished amidst the debris of ruined buildings. In the vicinity, the variety of monuments to the dead is no less worthy of note.

Two sites are remarkable for their exceptional size and the variety of buildings found there: Brad, in the north, and El-Bara, in the south. Situated on the denuded plateau which forms the northern part of the Jebel Seman, Brad looks like a small town; in fact, it was the administrative and commercial centre of a very large region; it grew up around the nucleus of an ancient settlement (interesting remains of third-century baths and two large churches dating from 399-402 and 561, respectively) to reach its greatest size in the seventh century. El-Bara,

133 361 172 361 172 P. 29 C

361 172 the main centre of the Jebel Zawiyé, was both an agricultural and an industrial town (large-scale production of oil and wine), and finally covered an area about 2 miles long by 1 1 wide. Among the confused heaps of its ruins, the remains of several churches and rich mausoles of the sixth century, with their pyramidal crowns, are recognizable.

172 341 G. Tchalenko has drawn attention to the similarity of the architecture throughout the limestone plateau due to the use of the same materials and the same methods of hewing and bonding stone. He has also noted the unity and homogeneity of the carved ornamentation, which was gradually adapted to the new forms of the various buildings. This suggests that itinerant groups of craftsmen went from place to place, taking their style and methods with them.

172 346 Evidence is provided by countless buildings, varying in nature and importance. We would draw particular attention to two of them, which seem to surpass all the others by their quality and exceptional charm. The first is the cruciform basilica of St. Simeon (Qalaat Semaan) built in the third quarter of the fifth century around the column on which the Stylite spent the last 37 years of his life and which, long after his death, was still a famous place of pilgrimage. The originality of the plan, the masterly structure of the central octagon, with its great semi-circular arches, the harmonious proportions of the chevet and the southern façade, together with the neighbouring baptistery and conventual buildings, make this peerless architectural group "the greatest and grandest Christian ruin in the East". The second of these monuments, lesser known because it is difficult of access, is the basilica of Qalbloze, standing in a temenos, like an ancient temple, on the crest of the Jebel el-Ala. It dates from the end of the fifth century. Its façade flanked by towers, its chevet adorned with columns, the great arches separating the nave from the side aisles, the majestic proportions of the apse, and the quality and sober arrangement of carving, produce that impression of harmony and perfection that only a masterpiece can achieve.

THE POPULATION OF THE LIMESTONE PLATEAU

361 172 The profusion of ruins over such a large area, not only in the vicinity of fertile plains, but on rocky and waterless plateaux shows that there was once a large population, which later disappeared completely. The construction of water tanks may have helped the people to subsist, but that alone cannot explain their extraordinary prosperity. What, then, were their means of livelihood?

Some have thought the answer to this question to be that the arable land disappeared as a result of complete and unchecked deforestation, which brought about a radical change in the conditions of life. Tchalenko does not agree; in the work already referred to, he gives a simpler and more plausible explanation of this phenomenon.

It has long been established that the ancient inhabitants of the limestone plateau owed their prosperity to the cultivation of the olive and, to a lesser degree, of the vine. The many presses found in all the settlements are proof of this. The cultivation of these crops is perfectly feasible in the soil and climate of the present day. It was a change in political and social circumstances which brought about the decline in the population. Where the soil accumulated in rocky basins and

361 clubs is beneficial to give a village food by the cultivation of cereals, it may be enough to make that village prosperous by the growing of trees. The cultivation of the olive as the only crop however, implies firstly that capital must be immobilized for a long time, while the trees are growing and, secondly that there must be suitable channels of trade for the produce to be disposed of, whether in return for other necessary goods. These conditions presuppose a long period of peace and security. This was once assured by the Pax Romana, and in recent years a stable régime has again been instituted. It is already producing its first results: people are again beginning to grow trees and to settle on the limestone plateau.

This is a development fraught with consequences for the future fate of the ancient monuments.

PRESENT-DAY PROBLEMS: THE PRESERVATION OF THE MONUMENTS

192 The fact that the limestone plateau is again becoming populated adds a new difficulty to those already arising out of the nature of the ruins and their wide dispersion. The protection of the monuments was already complicated by the fact that they are scattered over a distance of nearly 50 miles, with bad communications, and by the state to which they have degenerated—enormous and sometimes practically impenetrable masses of stone where buildings, now collapsed, once stood, in the midst of which the churches are generally situated. Now we find, in addition, that the new inhabitants of this region tend, for preference, to settle among the ruins, occupying the ancient buildings, repairing the water tanks and taking from the fabric of the old structures the hewn stones they need for building, here lying so conveniently to hand.

It is true that today there is no risk of any great building's being totally destroyed, as happened not so long ago, to the magnificent Tetrastoön church. The most urgent measures have already been taken by the Directorate of Antiquities; certain monuments (particularly those at Qalaat Semaân) have been consolidated; regional inspectors keep an eye on the situation, regularly visiting the ruins and drawing up reports. These measures are producing good results, but they could still be taken further, although it is not to be expected that they will ever provide complete safeguards. In fact, it is impossible to preserve all the monuments, provide a keeper for every site, or counteract the effects of the repopulation of the region, which in itself is a very welcome development. In such a situation, the only practicable policy is to consolidate and restore the most interesting buildings, whose architectural value is obvious, and leave to their fate the countless ruins which consist only of parts of walls still standing or the tumble-down masonry of houses now collapsed.

Two comments are thus called for.

Firstly, attention must be drawn to the very great importance of archeological publications and the outstanding services rendered by the scholars who produce them. Detailed descriptions of the ruins, accompanied by plans, photographs and architectural drawings, as well as more general studies relating to the monuments, make it possible to preserve an accurate picture of a state of affairs that is bound to change or come to an end. We have only to compare the present situation with that described in Vogüé's or Butler's publications in order to realize this.

p.30 B

16: Collart et al G-5 (1953) 1954 MD1 Syria MD1

DEAD CITIES
IN THE SOUTH

THE HAURAN AND THE JEBEL DRUZE

133 Black is the dominant colour in the basalt country of southern Syria. The eruptive rocks strewn over the soil give the landscape a highly distinctive character; black are the stones, black the buildings, black the sculptures.

The whole region was formerly known as the Hauran, but today this name is applied only to the western portion, as distinct from the eastern part, the Jebel Druze. The same distinction is to be found in the differing aspects of the two portions. To the west, as far as the eye can see, lies an enormous fertile plain which produces abundant crops of wheat and barley. To the east, rises rugged mountainous country. These mountains have the characteristic contours of extinct volcanoes, but although they are fairly high (from 1,500 to 1,700 metres), they do not appear so, for the ground rises gradually and the altitude of the foothills is always over 1,000 metres.

172 In this part of the country, the building of monuments on a large scale began with the establishment of the Roman Province of Arabia, in A.D. 106, by Trajan's legate, Cornelius Palma, and was encouraged by the Antonines, Septimius Severus and Philip the Arab. It continued during the Christian period, for there were numerous bishoprics from the time of the first councils onwards and many churches and monasteries were then built. After the Islamic conquest (636), only the towns of Bosra and Salkhad remained of any importance, owing to their strategic position; their main buildings (military and religious) date from the twelfth and thirteenth centuries.

The abandonment of the ancient sites, however, rapidly resulted everywhere in the ruin of their monuments. Where there had been most villages, there they were most completely deserted.

SITES AND MONUMENTS IN THE JEBEL DRUZE

361 172 Two of the many sites, Chahba and Qanawat, have fairly large groups of monuments.

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172

Chahba, formerly Philippopolis, was founded in the third century by the emperor, Philip the Arab, on the square plan of a Roman camp. The gates of the town, the wonderfully preserved pavement of the cardo and the decumanus, a small theatre, thermae and various other monuments are still to be seen on the ancient site, while huge mosaics from it are now preserved at Suweida and Damascus. Qanawat, formerly Kanatha, stands in undulating country, planted with trees, where the still well-preserved ruins make a very striking picture. Among these ruins are to be seen curious tombs, the colonnades (still standing) of several temples and the great group of buildings known as the seraglio, an interesting collection of Roman and Christian structures, where it is possible to distinguish the corbelled columns of a prostyle temple, the portico, atrium and hall of a large fourth-century basilica, and the curiously ornamented façade of a church almost as ancient.

At Chahba, as at Qanawat, the inhabitants are now living in the ruins, having installed themselves in certain buildings and damaged others by taking materials from them. The same situation is found at most of the large number of ancient centres in this region, and particularly at Chahba, where the famous basilica, the palace with its interesting façade and a beautiful house adorned with columns are not only distinctive in themselves, but also provide excellent examples of those stone slab roofs supported on corbels which are a characteristic feature of the local architecture. At Suweida, the busy centre of the Jebel Druse, there is practically nothing left of the ancient monuments. Even a great group of buildings like the temple of Sia has now completely disappeared. Moreover, we have only to compare the present state of the monuments with that described in the publications issued at the beginning of the century to realize how much destruction has taken place during the last 30 years.

We must hasten to add, however, that the necessary measures have been taken to prevent further damage. The Directorate of Antiquities has put in hand the most urgent consolidation work; inspectors keep an eye on the monuments and report any new discoveries, while the museum at Suweida prevents the dispersion and disappearance of the objects found. Nevertheless, the great numbers of ancient remains and the fact

P.32 C

that they are widely scattered and often difficult of access, make it hard to ensure really effective protection. 361 172

THE CHURCHES OF EZRAA

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At least a brief mention must be made of the importance of Ezraa. The churches of St. George and St. Hélie, dating from 514 and 542 respectively, are important in the history of early Christian art. Today, they are in a deplorable state of neglect. The cupola of the church of St. George collapsed in 1912. Ugly repairs have been made to both. The consolidation and intelligent restoration of both these buildings is particularly to be recommended.

BOSRA

361 172

The old capital of the Roman Province of Arabia is now a humble village. It contains remarkable ancient ruins, both Christian and Islamic, whose architectural beauty and historical importance recall the city's long and brilliant past.

The topography of the Roman town is still clearly indicated by the straight course of the main thoroughfare, built on the ancient decumanus; several columns of its porticos and one of the gates at the western end of the town are still standing. The visitor will note a great monumental arch with three bays, the ruins of thermae and four large Corinthian columns which may have formed part of a nymphaeum.

346 172

Built in 513 under the Archbishop Julianos, the cathedral, now in a very ruinous state, is one of the oldest examples of a large church with a cupola and central plan. From an inscription, we know that Bosra possessed an even older church, dedicated to the Virgin in the third quarter of the fourth century by the Archbishop Antipater; this inscription reminds us of the important part played by the town in early Christian history. Its name is also linked with the early history of Islam, for a large building with an apse and a blind façade is believed to be the remains of the monastery where the monk Bahira taught Mahomet and foretold his prophetic calling. A mosque, Al-Mabrak, was later built on the spot where, according to tradition, the Prophet's camel knelt.

This is one of the many mosques whose high dark minarets, square-built in the twelfth century, give the town of Bosra its own particular stamp. Although the Great Mosque of Omar is in a better state of preservation and although the minaret of Al-Fatmé has a slenderer grace, the Al-Mabrak mosque and the adjoining madrasah, built in 1136—the oldest Syrian madrasah, according to J. Sauvaget—form a very remarkable architectural group.

The rapid decay of these monuments is most regrettable. A glance at the older publications will show the extent of the damage, which has been made worse by the building of modern

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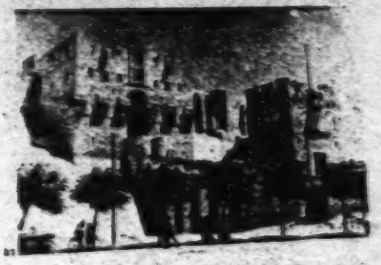

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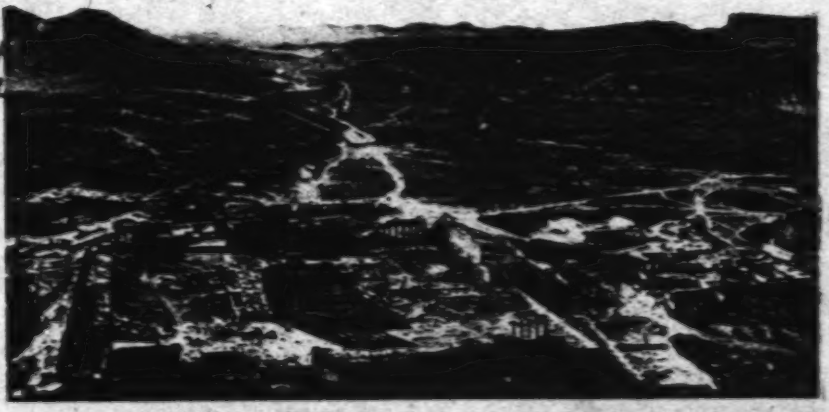

17. Palmyra. Aerial view.
18. Palmyra. Colonnade of the courtyard of the Temple of Bel.
19. Palmyra. Tomb of Elahbel.

following P 35-G

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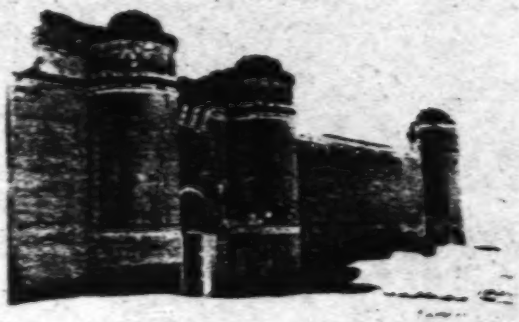

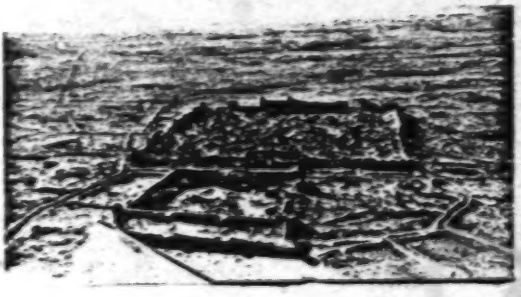

m. Qasr el-Hair el-Gharbi. Aerial view.
n. Qasr el-Hair el-Gharbi. Entrance to the castle.
o. Qasr el-Hair el-Gharbi. Aerial view.

following P. 35 - H

PRODUCTION

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عدد رخص البناء الممنوحة من قبل الدائرة الفنية في مديرية دمشق (سنوات ١٩٣٩ - ١٩٥٣)

NUMBER OF BUILDING PERMITS ISSUED BY THE TECHNICAL DEPARTMENT IN DAMASCUS, YEARS 1939 — 1953

Table No. 15

جدول رقم ١٥

Year and Month	الأبنية الحديثة للسكن New Residential Buildings			الأبنية الحديثة التجارية والصناعية New Commercial and Industrial Buildings		عدد الرخص للبيوت الخشبية Permits for simple and wooden constructions	السنة والشهور
	المساحة المبنية م٢ Floor Area M2	وحدات السكن Number of Residential units	عدد الرخص Number of Permits	المساحة المبنية م٢ Floor Area M2	عدد الرخص Number of Permits		
1939	50,876	287	190	—	—	337	١٩٣٩
1940	40,373	240	119	—	—	471	١٩٤٠
1941	24,300	140	74	—	—	334	١٩٤١
1942	20,708	127	65	—	—	288	١٩٤٢
1943	41,207	250	126	—	—	316	١٩٤٣
1944	79,492	540	254	—	—	346	١٩٤٤
1945	55,971	353	176	—	—	434	١٩٤٥
1946	90,356	680	326	—	—	627	١٩٤٦
1947	177,400	838	369	—	—	580	١٩٤٧
1948	164,849	885	434	—	—	515	١٩٤٨
1949	165,758	903	393	—	—	386	١٩٤٩
1950	174,674	863	407	33,918	92	333	١٩٥٠
1951	133,058	833	332	26,565	62	246	١٩٥١
1952	178,925	1,107	456	30,984	65	224	١٩٥٢
1953	231,733	1,239	463	33,032	63	188	١٩٥٣
1953							١٩٥٣
January	19,834	107	42	3,101	4	12	كانون ثاني
February	17,928	114	46	2,143	5	13	شباط
March	11,419	67	30	5,129	8	17	آذار
April	19,617	116	37	2,235	8	6	نيسان
May	25,085	143	45	5,111	9	17	أيار
June	17,335	98	33	925	3	21	حزيران
July	20,468	96	45	—	—	18	تموز
August	26,513	150	44	8,069	8	18	آب
September	23,512	132	40	619	3	21	أيلول
October	10,392	62	36	3,625	3	20	تشرين أول
November	15,747	86	30	687	6	10	تشرين ثاني
December	23,872	74	35	1,387	3	17	كانون أول

3:Royal Institute of International Affairs U-4 (no date)1954 M1 Middle East
SYRIA MD1
LEBANON ME1

Chapter Ten

SYRIA AND LEBANON

The Land and the People

The area of the present Syria and Lebanon lies to the north of Arabia Deserta and is the western horn of the Fertile Crescent. The two republics do not enclose within their boundaries a natural geographic entity and their climate and topography are best studied in relation to the surrounding countries;[1] but within the political boundaries of the two states, the following geographical divisions may roughly be distinguished:

(1) *The Coastal Strip*. This is about twenty miles wide near Latakia and rather less just north of Tripoli, but in some places disappears and the mountains meet the sea. Olives, bananas, citrus, and vegetables are cultivated intensively near Beirut.

(2) *The Mountains*. Starting from the north, the first coastal mountains are the Jebel Ansariya (also known as the Alawi Mountains) which average 4,000 feet and are well populated on the western slopes. To the south is the Homs–Tripoli gap and then starts the Lebanon range with peaks of over 10,000 feet. Even on the upper slopes of this range water is plentiful, there is close cultivation, and the villages and towns are prosperous. Near Beirut are situated the mountain resorts to which most of the city wor[illegible]ove each night when the summer brings its humid heat. The interior ranges of mountains lying parallel to that of the Lebanon are the Anti-Lebanon (between Homs and Zahle) reaching over 7,000 feet and the range of Hermon (between Zahle and the Israel border) which reaches 9,200 feet. Water and cultivation are far less plentiful on these than on the coastal mountains. Farther inland still and to the south of Damascus lie the Leja, a bleak area of igneous rock, and the Jebel Druze, which reaches 5,000–6,000 feet and lies north of the Jordan border.

(3) *Plains and Plateaux*. Hardly any of the territory of Syria and Lebanon lies less than 700 feet above sea-level and south of Hama almost all the land is over 1,600 feet. The richest agricultural land is on fairly high ground and forms part of a

[1] See W. B. Fisher, *The Middle East; a Physical, Social, and Regional Geography* (London, Methuen, 1950).

29:Dunn S-4 (1952)1952 MI Middle East
Syria MDI

471 186 648

a loan directly from another government. This attitude is illustrated clearly in the refusal of Syria to sign an agreement with Point Four.

A loan from an international body is another matter, and the country is seeking a loan of several million dollars from the International Bank for development of transportation, particularly roads in the Jezira, and port facilities at Latakia.

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Without a large-scale public works program, only minor improvements can be made to the existing system. However, opportunities exist for increasing production through private investment.

The good crops of 1950, sold at exceptionally high prices, resulted in high profits and the accumulation of considerable capital. The hope of continued high profits caused much of this capital to be re-invested in equipment and farm improvements. The same incentive also brought out new capital which never before had been invested in agriculture. Judging from the number of tractors, combines and accessories, and irrigation pumps purchased during 1950 and 1951, the investment in agricultural equipment in these two years exceeded the total up to that time. Unprecedented expenditures for general farm improvements also were made, an exceptional step in a country without a history of investment in agricultural development beyond the acquisition of land and a few simple facilities. The capital base has been small. Production has about equaled consumption. There has been little surplus for savings. The few families with capital have used their funds in other ways, seldom for agriculture. But the experience of 1951 was not encouraging for long-continued investment in agricultural development. These investments were costly, many farmers paying double the United States prices for equip-

361 427 241

These farmers are typical of those in northern Syria. All the tenants of one landlord usually live in villages like this one near Aleppo. Villages vary in size from a few hundred to several thousand depending on the size of the farm.

of agriculture are the present forms of land tenure. The proportion of large- and small-scale proprietors is not accurately known, but at least one half of the total farm acreage is owned by wealthy, and often absentee, landlords, and worked according to the share-tenancy system. In many northern districts, particularly in Latakia and Al Jazira provinces, the proportion is probably closer to 70 to 80 per cent. Communal ownership by tribes or villages is also common in some areas. The constitution of Syria provides for the creation of a landowning peasantry through the redistribution and the sale of state lands, but as yet the percentage of independent farmers is relatively small. Many tenant families and agricultural laborers live at subsistence levels under conditions of extreme poverty. Within recent years attempts have been made to encourage the settlement of the Bedouin tribes. Some now live in permanent villages, where they combine cultivation of cereals with the raising of sheep, migrating seasonally with their flocks in search of pasturage.

Wheat is the principal crop. Barley, maize and other cereals are also grown, especially in the areas of Homs, Hama, Hauran and Al Jazira. Olives, fruits and vegetables are important products on the oasis around Damascus and in the coastal region. Cotton is cultivated in Latakia, Aleppo and Al Jazira provinces, while tobacco flourishes in some sections of Latakia. Other industrial crops include sugar cane, sugar beets, sesame, castor oil beans and hemp. Sheep and goats are abundant in all parts of the country, but cattle are found chiefly in the coastal highlands, on the Damascus oasis and in the Hauran region in the southwest. Limited programs for the improvement of methods of farming and animal husbandry are undertaken by the veterinary and the agricultural services of the government. Four agricultural schools are operated by the Ministry of Agriculture—near Latakia, Hama, Aleppo and Damascus. In the Damascus region, the Near East Foundation

widely used, chiefly in the form of *leben*, a fermented milk product, cheese or butter. About 60 to 70 per cent of the milk is derived from sheep; the remainder, from cattle or goats. The Juliana breed of cattle and a special breed of "Damascus goat" are raised in most regions and are noteworthy as milk producers. Fowl and eggs are usually plentiful, but the consumption of meat is normally low, especially in the rural areas. Mutton is the principal meat, although the flesh of cattle, goats and camels is also utilized. Fish are valuable as a source of protein in the Euphrates and the Khabour river basins and along the coast; they are seldom available in other regions.

The Bedouin live chiefly on milk products made from the milk of their flocks, augmented by cereals and, occasionally, dates. Meat is often more of a luxury among the nomads than among the villagers. The average Bedouin diet is usually sparse and monotonous.

Housing

Life in rural Syria centers in the villages, which are self-contained social units. Structurally, they are compact, with the houses attached, and built in such a manner that a continuous windowless wall faces the street. Mud brick or adobe is the predominating building material, although stone is sometimes employed in the highland areas. The houses may consist of one or several rooms, which almost invariably open into a central compound. Separate shelters for storage and for the livestock may line the sides of the courtyards, but in the poorer villages the domestic animals are frequently housed with the family, at least during the winter months. The roofs are typically flat, made of rolled earth overlaid on poles and reeds or of thatch. Beehive-type houses with domed or conical roofs, however, are a characteristic feature of the treeless plains in Latakia, Aleppo and Al Jazira provinces. Dwellings built partially underground, often simulating caves, are encountered in some mountain villages in Latakia. Considerable

144 136 511 the refuse dumps and other breeding sites are sprayed with DDT preparations at intervals between May and October.

136 571 361 LICE. Infestation with lice is common among the inhabitants in the congested quarters of the towns and in the villages and the Bedouin encampments. *Pediculus humanus corporis* is important as the vector of typhus fever; cases are reported almost annually. *P. humanus capitis* and *Phthirus pubis* are somewhat less frequent.

126 164 FLEAS. Numerous species of fleas parasitize the wild and the domestic rodents. The rat flea, *Xenopsylla cheopis*, is prevalent: it is the vector in sporadic cases of murine typhus, and in past decades it was implicated in the transmission of plague. The human flea, *Pulex irritans*, and the cat and the dog fleas, *Ctenocephalides felis* and *C. canis*, are widely distributed. The stick-tight flea, *Echidnophaga gallinacea*, sometimes attacks man, but it is of no known medical significance.

136 BEDBUGS. *Cimex lectularius* is an annoying pest in all parts of the country.

136 232 164 TICKS AND MITES. A variety of ticks, including *Rhipicephalus sanguineus* and several species of *Hyalomma*, infest the livestock. *Ornithodorus tholozani* is found in the rural areas, where it is the local vector of tick-borne relapsing fever.

126 164 The grain itch mite, *Pediculoides ventricosus*, is plentiful in the grain-producing regions. It frequently attacks man, causing a painful rash. The human itch mite, *Sarcoptes scabiei*, is widely distributed, but it is decreasing steadily in prevalence.

136 752 SCORPIONS AND SPIDERS. Several species of scorpions are present, including *Buthus quinquestriatus*, *B. judaicus*, *B. crassicauda* and *B. europeus*, and *Scorpio maurus propinquus* and *S. maurus fucus*. Serious systemic effects resulting from scorpion stings [135] are rare, but deaths are sometimes recorded among young children, usually after attacks by *B. quinquestriatus*.

136 The poisonous black spider, *Latrodectus tredecimguttatus*, is found in some localities.

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the Qoubour el Bid section of the Al Jazira, along branches of the Khabour River northeast of Hassetché. *Schistosoma haematobium* is the only species identified in confirmed cases, but rectal complications are sometimes recorded. At present, the disease is confined to circumscribed foci, but in view of the irrigation and the agricultural potentialities of the region, its control is of major public health significance. The foci are apparently of recent origin. Whether the infection was introduced by Senegalese troops stationed in the vicinity, as claimed by the local inhabitants, or by nomadic tribes from Iraq is a matter of conjecture. Surveys have been made within recent years, under the auspices of the Ministry of Health and co-operating international organizations, and, although some discrepancies are evident in the determination of the infection rates in different villages, all emphasize the seriousness of the problem. Competent local authorities estimated in 1951 that the total incidence in that year approximated 12,000 cases.

In surveys undertaken in 1948,[34] the examination of urine samples collected from 545 persons in Qoubour el Bid and neighboring villages on the Gerahi branch of the Khabour River indicated general infection rates of about 62 per cent. They averaged 73 per cent among the men and the boys, and 49 per cent among the women and the girls. Moreover, they were consistently higher, in both sexes, in individuals under 20 years than in the older age groups. Equally high infection rates were found among the seminomadic peoples in the Tell Abiad area. A system of spot checking suggested probable infection rates of almost 100 per cent among males and of 60 per cent among females in 3 of the 5 villages visited.

A more exhaustive investigation in 1950[35] revealed the presence of infection among about 24 per cent of the inhabitants of 58 villages situated along 4 tributary streams in the Qoubour el Bid area. The infection rates ranged from 1 to 88 per cent: the most

highly infected villages were situated on the Gerahi and the Soublakh wadies. Similar surveys in 9 villages in the Tell Abiad area showed an average infection rate of 77 per cent, with the greatest prevalence in the villages on the Tell Abiad and the Slouq branches of the Belikh. Infection is apparently acquired early in life through swimming, washing or other contact with streams inhabited by infected snails. The intermediate host, *Bulinus truncatus*, has been collected from several localities.

Two mobile treatment teams were operated by the Ministry of Health in the infected areas in 1951. Plans for the inauguration of a snail eradication program were also under consideration.

OTHER HELMINTH INFECTIONS. Infection with one or more varieties of intestinal worms is prevalent in all parts of the country. The insanitary habits of the people and the frequent use of night soil as fertilizer promote the spread of the different species. Ascariasis is widely distributed. Infection rates ranging from 30 to 86 per cent have been demonstrated in Aleppo, Damascus, Homs and Hama, as well as in the surrounding villages. The infection is most prominent among the children, in both urban and rural areas. Trichuriasis is also widespread, but enterobiasis and strongyloidiasis tend to be sporadic.

Taeniasis is common. The beef tapeworm, *Taenia saginata*, is enzootic among the cattle, and the popularity of raw, or underdone, meat in certain national dishes is responsible for considerable human infection. The pork tapeworm, *T. solium*, is sometimes encountered among the Christian communities. Occasional infections with the dwarf tapeworm, *Hymenolepis nana*, are observed in most districts.

Hydatid disease is not unusual. *Echinococcus granulosus* is enzootic among dogs, sheep, goats, cattle and camels. In studies reported in 1936,[40] cysts were detected in 25 to 30 per cent of the sheep and the goats examined in slaughterhouses in Aleppo, Damascus and Homs. Infection was uni-

761 Comparative rates in urban and rural communities were determined in a series of tests on unorganized groups in the city and two adjacent farming districts. In Damascus, positive reactions to tuberculin were given by 47.7 of the boys and 40.8 per cent of the girls tested at 15 years of age. At 20 to 25 years of age, positive reactions were obtained in 86.7 per cent and 77.4 per cent, respectively; at 40 to 45 years of age, in 95.6 and 86.6 per cent, respectively. In the rural communities the positive reaction rates were consistently lower, but approached the urban levels in the older age groups. Among individuals at 15 years of age, 51.6 per cent of the boys and 27.2 per cent of the girls reacted to tuberculin in one area, and 18.1 per cent of the boys and 21.2 per cent of the girls, in another. At 40 to 45 years of age, the proportion of positive reactors averaged 80 per cent in the first series and 50 to 100 per cent in the second.[48]

744 761 747 Within recent years the Ministry of Health has embarked upon a tuberculosis control program. In January, 1950, a tuberculin testing and BCG inoculation campaign was organized under the auspices of the United Nations International Children's Emergency Fund and associated organizations, which was taken over by the Ministry in September. Surveys have been carried out in most of the provincial capitals and surrounding rural districts, and the Ministry contemplates the gradual extension of the campaign to cover the populations in all parts of the country. In the course of the investigations completed in 7 provinces between January and September, 1950, almost 417,000 persons were tuberculin tested, and over 188,000 were inoculated with BCG vaccine. The majority were schoolchildren, although miscellaneous population groups of all ages were also included. The proportion of positive reactors in the different provinces ranged from 23 per cent in Jebel ed Druz (As Suwaydah) to 42 per cent in Aleppo.

459 361 751

758 743 The diagnostic and the treatment facili-

ties are inadequate, especially in the rural areas. Up to 1949 there were only 2 small tuberculosis hospitals in the entire country—near Damascus and near Aleppo. The development of increased medical facilities has recently been undertaken by the Ministry, and, in 1951, additions to the hospital near Damascus, to provide a total of 350 beds, and a new 300-bed hospital at Aleppo were under construction. Plans were also projected for the erection of a 500-bed hospital in Latakia province, which would bring the total number of beds available for the isolation and the treatment of tuberculous patients to between 1,000 and 1,200.

A tuberculosis demonstration and training center was established in Damascus in 1952 under the direction of the World Health Organization in collaboration with the Ministry and the Syrian University. It provides a regional headquarters for the training of doctors, nurses and social workers in the public health, the therapeutic and the social aspects of the disease.

Smallpox. Vaccination against smallpox is compulsory, but enforcement is necessarily incomplete in the more remote areas and among the nomadic tribes. Outbreaks occur from time to time, with sporadic cases reported almost annually in the intervening years. The disease was epidemic in Syria and Lebanon in 1933-34, but from 1935 to 1941 only occasional cases were observed. In 1941, smallpox spread to Syria from Iraq, where an epidemic focus had developed in 1940. Over 1,980 cases were recorded in 1942 and 1,132 in 1943. The outbreaks subsided in 1944, and again no more than sporadic cases were noted until 1948, when 894 cases were reported. The known incidence declined to 643 cases in 1949 and subsequently to 15 cases in 1950-51.

Other Infections. Pneumonia and influenza are prevalent. Epidemics of measles are frequent, with the peak of prevalence normally between January and May. The majority of cases are not seen by the medical officers, but, from the fragmentary data available, the fatality rates appear to aver-

age about 5 per cent. Pulmonary complications are generally responsible for a high mortality among the Bedouin children. Mumps, whooping cough and chickenpox are endemic, and often epidemic.

Meningococcus meningitis is sporadic. In the 12 years 1939-50, from 14 to 58 cases were reported annually, except in 1944, when the known incidence totaled 135 cases.

Occasional cases of diphtheria are observed, usually among children in the preschool and the school age groups. A high rate of subclinical infection undoubtedly exists, however, as demonstrated by Schick test studies.[48] Scarlet fever is relatively rare, although a few cases are reported each year. Streptococcus infections of the throat are common.

Poliomyelitis is seldom reported. No outbreaks have been recorded, but sporadic cases are sometimes encountered.

Diseases Spread or Contracted Chiefly Through Contact

Venereal Diseases. All forms of venereal disease are present, but little information is available from which to determine their actual prevalence. Syphilis is widely distributed, while gonorrhea occurs primarily in the cities and the towns. Soft chancre is sometimes seen among the poorer inhabitants, but lymphogranuloma inguinale is comparatively rare.

The nonvenereal treponemal infection, usually designated by the Arab term *bejel*, is common among the nomadic and the seminomadic populations in the Euphrates and the Al Jazira regions. The most prominent endemic foci are probably in the vicinity of Deir ez Zor, Raqqa and Meyadin. The disease is associated with low standards of living, and in the majority of cases infection is acquired in early childhood. Surveys have indicated that roughly 60 per cent of the above peoples in Euphrates and Al Jazira provinces are affected, while among some Bedouin tribes the infection rates approach 90 to 100 per cent. In different clinical and serologic studies, made at the mis-

sion hospital clinic in Deir ez Zor,[14, 18] the prevalence among the Bedouin has been estimated at 50 to 90 per cent and among the seminomadic Arab townsmen at 20 to 35 per cent. 164 361

The facilities for the diagnosis and the treatment of venereal diseases are meager. As of 1951, the Ministry of Health operated special venereal disease hospitals and outpatient clinics in Damascus and Aleppo. It also maintained 2 mobile dispensaries for the treatment of syphilis and bejel in the eastern provinces. A campaign for the mass treatment of bejel and syphilis was initiated in 1952 by the Ministry, in co-operation with the World Health Organization and the United Nations International Children's Emergency Fund. The findings of the various field units should eventually provide a comprehensive picture of the distribution and the prevalence of these diseases in eastern Syria. 738 743

Diseases of the Eyes. Trachoma is a major public health problem in all parts of the country, although it varies in prominence under urban and rural conditions. The infection rates usually average less than 10 per cent in the cities, but approximate 40 to 60 per cent in the rural areas, where over two thirds of the people live. Repeated surveys among school groups in northern Syria[21] indicate that slightly more than 5 per cent of the children in Aleppo are affected, in contrast with 30 to 40 per cent in the environs of the city and 60 per cent in the rural villages. The disease exists at all levels of society, but is less frequent among the nomadic tribes than among the settled communities in the same general region. Differences in prevalence, influenced by local customs, are also noted among the various racial and religious groups. In a survey covering mountainous and coastal areas of Latakia *muhafazat*, reported in 1933,[20] the highest infection rates were found in the predominantly Alawite districts. The index of infection averaged 44 per cent. It ranged from 25 per cent among the Armenians to 61 per cent among the 164 369 164 563

164 Alawites and 68 per cent among the Ismail-
563 ites. Trachoma is one of the principal causes of blindness, in spite of the fact that, in the opinion of many local observers, a large percentage of uncomplicated cases exhibit a tendency to spontaneous cure.

164 Gonococcal and other types of infectious conjunctivitis are common. In a series of 315 conjunctival examinations, reported in 1931,[19] from the mission hospital at Deir ez Zor, *Hemophilus lacunatus* (Morax-Axenfeld bacillus) was identified in 34 per cent, *H. conjunctivitidis* (Koch-Weeks bacillus) in about 10 per cent and *Neisseria gonorrhoeae* in 5 per cent, while different pyogenic cocci were found in the remainder.

164 Diseases of the Skin. As is to be ex-
515 pected, in view of the widespread ignorance
758 of the principles of personal hygiene and the scarcity of water in many areas, skin diseases are prevalent. They represented almost 10 per cent of the total cases treated in government hospitals and clinics in 1949.

164 Mycotic infections are numerous, with ring-
361 worm of the scalp predominating in most
511 localities. Impetigo and scabies are widespread, particularly among children in the rural villages. Pediculosis is almost universal among the inhabitants of the poorer, congested communities, both urban and rural. Occasional cases of human myiasis are encountered. A form of dermatitis, caused by the bite of *Phlebotomus papatasii* and other sandflies, is sometimes encountered among susceptible individuals in the summer months.

164 Leprosy. Endemic foci of leprosy exist in various parts of the country, but primarily in Hauran and Latakia provinces. The extent of infection is not accurately known, and estimates of prevalence range from 90 to 250 cases. A few new cases are
[743] reported each year. Theoretically, isolation is compulsory, and the Ministry of Health maintains a leprosarium at Douma, near Damascus, which has facilities for the care of about 75 lepers.

752 Rabies. Sporadic cases of rabies are re-
164 ported. The majority result from the bites

Relief and Works Agency for Palestine Refugees and the Ministry in the Khabour and the Belik river basins in 1950,[8, 9] blood examinations were performed on small representative samples of the population. All age groups were included, although the majority of persons tested were under 15 years of age. The parasite rates averaged about 33 per cent in villages in the Belikh valley, while in the areas under perennial irrigation along the Khabour River and its tributaries, they varied from 33 to 94 per cent. In the rain-irrigated districts northeast of Hassetché, the rates declined to from 12 to 16 per cent. In many localities the malaria problem has been aggravated by the introduction of rice cultivation. In some, as in Ajaja, cultivation had to be abandoned, and in others, it is prohibited within a 2-mile radius of the villages.

The malaria season extends from April to November, with peaks of prevalence in July and October, but some transmission occurs throughout the year in most malarious regions. The relative proportion of *Plasmodium vivax* and *P. falciparum* infections varies according to the season and from place to place. *P. vivax* is usually responsible for 75 to 80 per cent of the cases of malaria in the Damascus area. *P. falciparum* and *P. vivax* were identified with about equal frequency, however, in the 1950 surveys in the Belikh and the Khabour valleys. In general, *P. vivax* predominates during spring and early summer, but is superseded by *P. falciparum* toward the end of the malaria season. *P. malariae* infections are rarely encountered.

Malaria control measures are undertaken by the municipal authorities in Damascus, Aleppo and a few other towns. Control programs, based upon residual spraying with DDT preparations or Gammexane, are conducted in towns and villages in limited areas by the Ministry of Health, often in conjunction with other agencies. In 1950, they covered villages in Damascus and Hauran provinces, the town of Latakia and a few localities in Jebel ed Druz. The most exten-

63:Simmons et al G-5 (1941-1951) 1954
M1 Middle East
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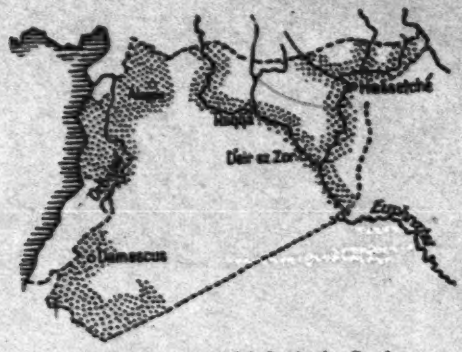

Distribution of Malaria in Syria

sive work has been carried on, in co-operation with the Near East Foundation, in the agricultural districts around Damascus, where 224 villages with over 180,000 inhabitants were protected in 1949-50. A marked reduction in the number of cases has been noted in all the areas treated. Successive examinations of over 500 children in 16 treated villages near Damascus revealed a decrease in spleen rates of from 78 per cent in 1950 to 20 per cent in 1951.[8] A malaria control program was inaugurated in the Homs district in 1952, under the auspices of the World Health Organization. *Anopheles sacharovi* and *A. claviger* are the principal vectors in the Damascus region; *A. sacharovi* and *A. superpictus*, in the river valleys in the northeast.

Rickettsial Infections. Localized outbreaks of louse-borne typhus are recurrent during the winter and the spring months, particularly in the congested quarters of the towns and the cities and among the nomadic tribes. Over 1,900 cases were reported in 1942, when the acute shortages associated with the war created conditions conducive to the spread of the infection. Since that date no more than 30 to 95 sporadic cases have been recorded in any one year. Control measures, including deverminization procedures and the immunization of the exposed populations, are enforced by the health authorities in affected areas.

No differentiation is made in the official

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63-Simmons et al G-5 (1941-1951) 1954
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reports between louse-borne and flea-borne typhus, but, since small numbers of cases are listed during the summer months, both types of infection are probably included. Murine typhus is endemic throughout this region, and its presence in Greater Syria (including Lebanon) has been confirmed by rickettsial agglutination and guinea pig inoculation tests on blood serums from indigenous cases.[38] Tick-borne typhus is not reported, but cases of fièvre boutonneuse have been observed in the neighboring portions of Lebanon.

Relapsing Fever. Louse-borne relapsing fever is rare, but small outbreaks were reported from Syria and Lebanon in 1945—extensions of the epidemics which spread through the eastern Mediterranean countries in 1942-46.

Tick-borne relapsing fever is endemic. Occasional cases are seen in the rural villages, usually between May and September. The tick, *Ornithodorus tholozani*, is the vector: specimens collected from a cave near Damascus have been found to be infected with the spirochetes.[42]

Plague. Plague occurs sporadically in the districts along the Turkish and the Iraqi frontiers on the north and on the Israeli border in the south. No severe outbreaks have been recorded within recent years, and no cases since 1946.

Leishmaniasis. Cutaneous leishmaniasis is widely distributed. The presence of a major focus in Aleppo province accounts for the local classification of the disease as "Aleppo boil." The infection rates in the vicinity of Aleppo formerly approximated 70 per cent, but they have declined appreciably with the extension of insect control measures within recent years. Smaller endemic foci exist in Damascus and other centers. The disease is frequently encountered in the rural villages around Damascus, but it has been almost totally absent from the city itself since the inauguration of the municipal fly control campaign in 1946. Cases usually occur between May and

October, when the vector sandflies, *Phlebotomus papatasii* and *P. sergenti*, are abundant.

Kala-azar is seldom specifically reported from Syria, but occasional suspected cases have been described from the Jebel ed Druz region. A canine reservoir undoubtedly exists: the causative organisms have been demonstrated in a stray dog captured at el Bab, near Aleppo.[38]

Other Infections. Outbreaks of dengue fever are sporadic in the western provinces where the vector, *Aedes aegypti*, is indigenous. Sandfly fever, transmitted by *Phlebotomus papatasii*, is endemic and sometimes epidemic.

Nutritional Diseases

Undernutrition and subclinical avitaminosis are prevalent, particularly in the rural villages, where poverty and parasitic infections influence the nutritional standards of the people to a greater extent than in the urban areas. Serious nutritional conditions are most obvious among the children of the Bedouin tribes. Minor vitamin C deficiencies are widespread among the inhabitants of the grain-producing areas in the northeastern and the southern provinces. Occasional borderline cases of pellagra are encountered, but beriberi and ariboflavinosis are unusual. Cases of rickets are numerous, especially in the cities and the towns. Protein edema and overt vitamin A deficiencies are relatively rare.

Miscellaneous Conditions

Infectious hepatitis is endemic, and epidemics are sometimes reported. Q fever is enzootic among the sheep and the goats, but the extent of human infection is not known. In a series of complement fixation tests recently performed on blood serums taken from sheep and goats in different parts of the country, positive reactions were obtained in 13 to 63 per cent.[49]

Silicosis and benign pneumoconiosis are